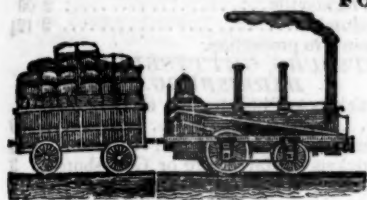
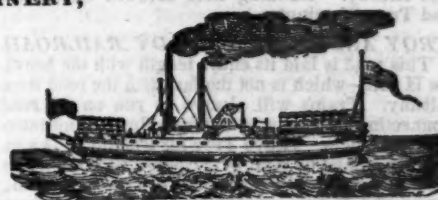


AMERICAN RAILROAD JOURNAL, AND GENERAL ADVERTISER

FOR RAILROADS, CANALS, STEAMBOATS, MACHINERY,
AND MINES.



ESTABLISHED 1831.



PUBLISHED WEEKLY, AT No. 23 CHAMBERS STREET, NEW YORK, AT FIVE DOLLARS PER ANNUM.

SECOND QUARTO SERIES, VOL. II, No. 38.]

SATURDAY, SEPTEMBER 19, 1846.

[WHOLE No. 535, VOL. XIX.

BOSTON AND PROVIDENCE RAILROAD. Passenger Notice. Summer Arrangement. On and after Monday, April 6, 1846, the Pas-

senger Trains will run as follows:
For New York—Night Line, via Stonington. Leaves Boston every day, but Sunday, at 5 p.m.
Accommodation Trains, leave Boston at 7½ a.m. and 4 p.m., and Providence at 8 a.m. and 4½ p.m.
Dedham trains, leave Boston at 8 a.m. 12½ m., 3½ p.m., and 6½ p.m. Leave Dedham at 7 a.m. and 9½ a.m. and 2½ and 5½ p.m.
Stoughton trains, leave Boston at 11½ a.m. and 5½ p.m. Leave Stoughton at 7-20 a.m. and 3½ p.m.
All baggage at the risk of the owners thereof.
31 ly W. RAYMOND LEE, Sup't.

BRANCH RAILROAD AND STAGES Connecting with the Boston and Providence Railroad. Stages connect with the Accommodation trains at the Foxboro' Station, to and from Woonsocket. At the Seekonk Station, to and from Lonsdale, R. I. via Pawtucket. At the Sharon Station, to and from Walpole, Mass. And at Dedham Village Station, to and from Medford, via Medway, Mass. At Providence, to and from Bristol, via Warren, R. I.—Taunton, New Bedford and Fall River cars run in connection with the accommodation trains.

NORWICH AND WORCESTER RAILROAD. Summer Arrangement, commencing Monday, April 6, 1846.

Accommodation Trains, daily, except Sunday. Leave Norwich, at 6 a.m., and 4½ p.m. Leave Worcester, at 10 a.m., and 4½ p.m.

The morning Accommodation Trains from Norwich, and from Worcester, connect with the trains of the Boston, and Worcester and Western railroads each way.

The Evening Accommodation Train from Worcester connects with the 1½ p.m. train from Boston.

New York Train via Long Island Railroad: Leave Allyn's Point for Boston, about 1 p.m., daily, except Sunday.

Leave Worcester for New York, about 10 a.m., stopping at Webster, Danielsonville, and Norwich.

New York Train via Steamboat—Leave Norwich for Boston, every morning, except Monday, on the arrival of the steamboat from New York, stopping at Norwich and Danielsonville.

Leave Worcester for New York, upon the arrival of the train from Boston, at about 4½ p.m., daily, except Sunday, stopping at Webster, Danielsonville and Norwich.

Freight Trains daily each way, except Sunday.—Special contracts will be made for cargoes, or large quantities of freight, on application to the superintendent.

Fares are Less when paid for Tickets than when paid in the Cars. J. W. STOWELL, Sup't.

BOSTON AND MAINE RAILROAD. Upper Route, Boston to Portland via, Reading, Andover, Haverhill, Exeter, Dover, Great Falls, South & North Berwick, Wells, Kennebunk and Saco.

Summer Arrangement, 1846.

On and after April 13, 1846, Passenger Trains will leave daily, (Sundays excepted,) as follows:
Boston for Portland at 7½ a.m. and 2½ p.m.
Boston for Great Falls at 7½ a.m., 2½ and 4½ p.m.
Boston for Haverhill at 7½ and 11½ a.m., 2½, 4½ and 6 p.m.
Boston for Reading at 7½, 9, and 11½ a.m., 2½, 4½, 6 and 8 p.m.
Portland for Boston at 7½ a.m., and 3 p.m.
Great Falls for Boston at 6½ and 9½ a.m., and 4½ p.m.
Haverhill for Boston at 6½, 8½, and 11 a.m., and 4 and 6½ p.m.
Reading for Boston at 6½, 7½ and 9½ a.m., 12 m., 1½, 5 and 7½ p.m.

The Depot in Boston is on Haymarket Square. Passengers are not allowed to carry Baggage above \$50 in value, and that personal Baggage, unless notice is given, and an extra amount paid, at the rate of the price of a Ticket for every \$500 additional value.

CHAS. MINOT, Super't.

NEW YORK & HARLEM RAILROAD CO.—Summer Arrangement.

On and after Friday, May 1st, 1846, the cars will run as follows:

Leave City Hall for Yorkville, Harlem and Morrianna, at 7, 8, 9, 10 and 11 a. m., and at 1, 2, 3, 30, 4, 30, 5, 6, and 6 30 p. m.

Leave City Hall for Fordham and Williams' Bridge, at 7, 10 and 11 a. m., and at 2, 3, 30, 5, and 6 30 p. m.

Leave City Hall for Hunt's Bridge, Bronx, Tuckahoe, Hart's Corners and White Plains, at 7 and 10 a. m., and at 2 and 5 p. m.

Leave Harlem and Yorkville, at 7 10, 8 10, 9, 10, 11 10 a. m., and at 12 40, 2, 3 10, 5 10, 5 30, 6 10, and 7 p. m.

Leave Williams' Bridge and Fordham, at 6 45, 7 45, and 10 45 a. m., and at 12 15, 2 45, 4 45, and 5 45 p. m.

Leave White Plains, at 7 and 10 a. m., and at 2 and 5 p. m.

The freight train will leave the City Hall at 1 o'clock, p. m., and leave White Plains at 1 o'clock in the morning.

On Sundays, the White Plains train will leave the City Hall at 7 a. m. and 5 30 p. m.; will leave White Plains at 7 a. m. and 6 p. m.

On Sundays, the Harlem and Williams Bridge trains will be regulated according to the state of the weather.

SUMMER ARRANGEMENT.—NEW YORK AND ERIE RAILROAD LINE, from April 1st until further notice, will run daily (Sundays excepted) between the city of New York and Middletown, Goshen, and intermediate places, as follows:

FOR PASSENGERS—

Leave New York at 7 A. M. and 4 P. M.

" Middletown at 6½ A. M. and 5½ P. M.

FARE REDUCED to \$1 25 to Middletown—way in proportion. Breakfast, supper and berths can be had on the steamboat.

FOR FREIGHT—

Leave New York at 5 P. M.

" Middletown at 12 M.

The names of the consignee and of the station where to be left, must be distinctly marked upon each article shipped. Freight not received after 5 P. M. in New York.

Apply to J. F. Clarkson, agent, at office corner of Duane and West sts. H. C. SEYMOUR, Sup't. March 25th, 1846.

Stages run daily from Middletown, on the arrival of the afternoon train, to Milford, Carbondale, Honesdale, Montrose, Towanda, Owego, and West; also to Monticello, Windsor, Binghamton, Ithaca, etc., etc. Agent on board. 13 tf

BOSTON AND ALBANY.—WESTERN RAILROAD.—Fare Reduced.

1846. Spring Arrangement. 1846

Commencing April 1st.

Passenger trains leave daily, Sundays excepted—

Boston 7½ p. m. and 4 p. m. for Albany.

Albany 6½ " and 2½ " for Boston.

Springfield 7 " and 1 " for Albany.

Springfield 7 " and 1½ " for Boston.

Boston, Albany and Troy:

Leave Boston at 7½ a. m., arrive at Springfield at 12 m., dine, leave at 1 p. m., and reach Albany at 6½ p. m.

Leave Boston at 4 p. m., arrive at Springfield at 8 p. m., lodge, leave next morning at 7, and arrive at Albany at 12½ m.

Leave Albany at 6½ a. m., arrive at Springfield at ½ m., dine, leave at 1½ p. m., and arrive at Boston 6½ p. m.

Leave Albany at 2½ p. m., arrive at Springfield at 8½ p. m., lodge, leave next morning at 7, and arrive at Boston at 12 m.

The trains of the Troy and Greenbush railroad connect with all the above trains at Greenbush.

Fare from Boston to Albany, \$5; fare from Springfield to Boston or Albany, \$3 75.

Merchandise trains run daily (Sundays excepted) between Boston, Albany, Troy, Hudson, Northampton, Hartford, etc.

For further information apply to C. A. Read, agent, 27 State street, Boston, or to S. Witt, agent, Albany.

JAMES BARNES, Superintendent and Engineer.

Western Railroad Office, Springfield, April 1, 1846. }

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CENTRAL AND MACON AND WESTERN Railroads, Ga.—These Roads with the Western and Atlantic Railroad of the State of Georgia, form a continuous line from Savannah to Oothcaloga, Ga., of 371 miles, viz:

Savannah to Macon—Central Railroad 190
Macon to Atlanta—Macon and Western 101
Atlanta to Oothcaloga—Western and Atlantic.. 80
Goods will be carried from Savannah to Atlanta and Oothcaloga, at the following rates, viz:

	Miles.	To Atlanta.	To Oothcaloga.
On Weight Goods—Sugar, Coffee, Liquor, Bagging, Rope, Butter, Cheese, Tobacco, Leather, Hides, Cotton Yarns, Copper, Tin, Bar & Sheet Iron, Hollow Ware & Castings.....	\$0 50	\$0 75	
Flour, Rice, Bacon in Casks or boxes, Pork, Beef, Fish, Lard, Tallow, Beeswax, Mill Gearing, Pig Iron and Grind Stones.....	0 50	0 62½	
On Measurement Goods—Boxes of Hats, Bonnets and Furniture, per cubic foot.....	0 20	0 26	
Boxes and Bales of Dry Goods, Saddlery, Glass, Paints, Drugs and Confectionary, per cubic foot.....	0 20 pr. 100lbs.	35	
Crockery, per cubic foot.....	0 15 "	35	
Molasses and Oil, per hhd., (smaller casks in proportion).	9 00	12 50	
Ploughs, (large,) Cultivators, Corn Shellers, and Straw Cutters, each.....	1 25	1 50	
Ploughs, (small,) and Wheelbarrows.....	0 80	1 05	
Salt, per Liverpool Sack.....	0 70	0 95	
Passage—Savannah to Atlanta, \$10; Children, under 12 years of age, half price, Savannah to Macon, \$7.			

Goods consigned to the subscriber will be forwarded free of Commissions.

Freight may be paid at Savannah, Atlanta or Oothcaloga.

F. WINTER, Forwarding Agent, C. R. R.
Savannah, Aug. 15th, 1846. 1y34

GEORGIA RAILROAD. FROM AUGUSTA TO ATLANTA—171 MILES.
AND WESTERN AND ATLANTIC RAILROAD FROM ATLANTA TO OOTHCALOGA, 80 MILES.

This Road in connection with the South Carolina Railroad and Western and Atlantic Railroad now forms a continuous line, 388 miles in length, from Charleston to Oothcaloga on the Oostenanla River, in Cass Co., Georgia.

Rates of Freight, and Passage from Augusta to Oothcaloga.

On Boxes of Hats, Bonnets, and Furniture per foot.....	16 cts.
" Dry goods, shoes, saddlery, drugs, etc., per 100 lbs.....	95 "
" Sugar, coffee, iron, hardware, etc.....	65 "
" Flour, bacon, mill machinery, grindstones, etc.....	33½ "
" Molasses, per hogshead \$9.50; salt per bus. 20 "	
" Ploughs and cornshellers, each.....	75 "
Passengers \$10.50; children under 12 years of age half price.	

Passengers to Atlanta, head of Ga. Railroad, \$7. German or other emigrants, in lots of 20 or more, will be carried over the above roads at 2 cents per mile.

Goods consigned to S. C. Railroad Co. will be forwarded free of commissions. Freight may be paid at Augusta, Atlanta, or Oothcaloga.

J. EDGAR THOMSON,
Ch. Eng. and Gen. Agent.
Augusta, Oct. 21 1845 *44 1y

BOILER IRON.—55 TONS ASSORTED
Boiler Iron, Nos. 3, 4 and 5, and of widths of 26, 32 and 36 inches, random lengths, in store, and for sale by A. & G. RALSTON & CO.,
1m30 4 South Front st., Philadelphia.

BACK VOLUMES OF THE RAILROAD JOURNAL for sale at the office, No. 23 Chambers street

THE WESTERN AND ATLANTIC Railroad.—This Road is now in operation to Oothcaloga, a distance of 80 miles, and connects daily (Sundays excepted) with the Georgia Railroad.

From Kingston, on this road, there is a tri-weekly line of stages, which leave on the arrival of the cars on Tuesday, Thursday and Saturday, for Warrenton, Huntsville, Decatur and Tuscumbia, Alabama, and Memphis, Tennessee.

On the same days, the stages leave Oothcaloga for Chattanooga, Jasper, Murfreesborough, Knoxville and Nashville, Tennessee.

This is the most expeditious route from the east to any of these places.

CHAS. F. M. GARNETT,
Chief Engineer.

Atlanta, Georgia, April 16th, 1846. 1y1

LITTLE MIAMI RAILROAD.—1846.—
Summer Arrangement.

Two passenger trains daily.

On and after Tuesday, May 5th, until further notice, two passenger trains will be run—leaving Cincinnati daily (Sundays excepted) at 9 a. m. and 1½ p. m. Returning, will leave Xenia at 5 o'clock 50 min. a. m., and 2 o'clock 40 min. p. m. On Sundays, but one train will be run—leaving Cincinnati at 9, and Xenia at 5 50 min. a. m.

Both trains connect with Neil, Moore & Co.'s daily line of stages to Columbus, Zanesville, Wheeling, Cleveland, Sandusky City and Springfield.

Tickets may be procured at the depot on East Front street.

The company will not be responsible for baggage beyond fifty dollars in value, unless the same is returned to the conductor or agent, and freight paid at the rate of a passage for every \$500 in value above that amount.

W. H. CLEMENT,
Superintendent.

GREAT SOUTHERN MAIL LINE! VIA Washington city, Richmond, Petersburg, Weldon and Charleston, S. C., direct to New Orleans. The only Line which carries the Great Southern Mail, and Twenty-four Hours in advance of Bay Line, leaving Baltimore same day.

Passengers leaving New York at 4½ P. M., Philadelphia at 10 P. M., and Baltimore at 6½ A. M., proceed without delay at any point, by this line, reaching Richmond in eleven, Petersburg in thirteen and a half hours, and Charleston, S. C., in two days from Baltimore.

Fare from Baltimore to Charleston.....\$21 00
" " " Richmond..... 6 60

For Tickets, or further information, apply at the Southern Ticket Office, adjoining the Washington Railroad Office, Pratt street, Baltimore, to 1y14 STOCOTON & FALLS, Agents.

MARAMEC IRON WORKS FOR SALE.

By Authority of a power of Attorney from Messrs. Massey and James, I will sell at Public Auction, at the Court House in the city of St. Louis, on MONDAY, the 2nd day of November next, the above named valuable IRON WORKS—together with 8,000 ACRES OF LAND, more or less, on which there are several valuable and productive Farms open and in cultivation.

The Maramec Iron Works are situated at the Maramec Big Spring, in Crawford Co., Mo., and consist of 1 BLAST FURNACE; 1 AIR FURNACE; 1 REFINING FORGE, with large Hammer for making Blooms and Anchovies;

2 CHEFFERY FORGES for Drawing Bar Iron; 1 ROLLING MILL for Rolling Blooms into Bars and Plates;

1 SAW AND 1 GRIST MILL,

All within 300 Yards of the head of the spring. There are 2 large frame Coal Houses, and all other Buildings necessary, such as Shops and Houses for the workmen.

This Spring is one of the largest in Missouri, discharging at the lowest time 7,000 cubic feet of water per minute. The Ore Bank from which the Ore has been heretofore taken is about 600 yards from the furnace; it is the Specular Iron Ore, the best for making Bar Iron, and the quantity inexhaustible.—It is an Iron Mountain, 400 feet above the level of the Maramec River; the ore is entirely uncovered, and there is an easy descent and a good road from it to the furnace.

The lands have been carefully selected by one of the owners with a view to the interest and convenience of the Works, and are situated principally on the Maramec River and its tributaries, embracing the best bottom lands and water powers. The following detached tracts, comprized in the above quantity, were selected for the advantages they possess;

183½ ACRES in T. 40 N. of R. 8 W. in Sec. 3, near Wherry's Mill, in Osage Co.; entered to secure a very valuable Mill power on the Branca Spring and a good landing on the Gasconade River.

80 ACRES on Benton's Creek, 12 miles from the Works; entered to secure an extensive and valuable Ore Bank 2½ miles from the Maramec, at a point where there is ample water power.

320 ACRES in T. 38 N. of R. 4 W. in Sec. 23 and 28, affording an extensive and valuable water power on the Maramec river.

160 ACRES in T. 37 N. of R. 3 W. in Sec. 4, embraces two inexhaustible and valuable Ore Banks and is 1½ miles from Water power sufficient for a furnace and Grist Mill, and is distant 6 miles from the above site on the Maramec.

80 ACRES in T. 37 N. of R. 8 W. in Sec. 33, including an extensive bank of excellent Ore, and distant 1½ miles from water power on the waters of the Gasconade River, in Pulaski Co., sufficient for Furnace and Mills. All those Banks are of the same kind as the one at the Works, and deemed inexhaustible.

1 LOT, containing nearly one Acre, on the South Bank of the Missouri River, 4 Miles above the town of Hermann, purchased for a warehouse and landing, and is one of the best landings on the River.

The lands above described are well timbered, and have been selected with a view to have an ample supply of wood and coal, for fences, building and other purposes. There are on the land valuable quarries of Limestone well adapted for Fluxes for the Ore, and also good quarries of Rock suitable for building. There are also on the land a great number of the finest kind of Springs. A large portion of the lands are bottoms well adapted to the production of Corn and other crops. The Works are situated in a very pleasant and healthful part of the country. The Maramec ore is believed to be admirably adapted to the manufacture of steel.

A further description of the property at this time is considered unnecessary, as those wishing to purchase will no doubt view the property, which will be shown by the Agent, residing at the works.

The terms of payment required will be one-third of the purchase money in hand and the balance in three equal annual payments, secured by mortgage on all the property.

A more particular description of the property will be given, and further conditions of the sale made known, on the day of sale.

Jno. F. ARMSTRONG, Agent.

St. Louis, June 6, 1846.

The Louisville, (Ky.,) Journal, Cincinnati Gazette, Tribune (Portsmouth, O.,) Nashville Whig, Pittsburg Gazette, National Intelligencer, United States Gazette, (Phila.) Railroad Journal (N. Y.,) and Boston Atlas, will publish the above once a week until the 20th day of October next, and send bills to this office for settlement, and mark price on first paper. 1825

TO RAILROAD COMPANIES AND MANUFACTURERS of railroad Machinery. The subscribers have for sale Am. and English bar iron, of all sizes; English blister, cast, shear and spring steel; Juniata rods; car axles, made of double refined iron; sheet and boiler iron, cut to pattern; tiers for locomotive engines, and other railroad carriage wheels, made from common and double refined B. O. iron; the latter a very superior article. The tires are made by Messrs. Baldwin & Whitney, locomotive engine manufacturers of this city. Orders addressed to them, or to us, will be promptly executed.

When the exact diameter of the wheel is stated in the order, a fit to those wheels is guaranteed, saving to the purchaser the expense of turning them out inside.

THOMAS & EDMUND GEORGE,
ja45 N. E. cor. 12th and Market sts., Philad., Pa.



RICH & CO'S IMPROVED PATENT SALAMANDER SAFES.

Warranted free from dampness, as well as fire and thief proof.

Particular attention is invited to the following certificates, which speak for themselves:

TEST No. 10.

Certificate from Mr. Silas C. Field, of Vicksburgh, Mississippi.

On the morning of the 14th ult., the store owned and occupied by me in this city, was, with its contents, entirely consumed by fire. My stock of goods consisted of oil, rosin, lard, pork, sugar, molasses, liquors, and other articles of a combustible nature, in the midst of which was one of Rich's Improved Patent Salamander Safes, which I purchased last October of Mr. Isaac Bridge, New Orleans, and which contained my books and papers. This safe was red hot, and did not cool sufficiently to be opened until 16 hours after it was taken from the ruins. At the expiration of that time it was unlocked, when its contents proved to be entirely uninjured, and not even discolored. I deem this test sufficient to show that the high reputation enjoyed by Rich's Safes is well merited.

S. C. FIELD.

Vicksburgh, Miss., March 9th, 1846.

Certificate from Judge Battaile, of Benton, Mississippi.

In October last I purchased one of Rich's Improved Salamander Safes, which was in the fire at the burning of my law office, and several adjoining buildings in this place, on the 17th of November last, at about half-past one o'clock A. M. of that day. The building was entirely consumed; and I take pleasure in stating that my papers in said safe were preserved without injury. A receipt book which was in said safe, had the glue drawn out of its leather back by the heat, and the back broken; but the leaves of the book, and the writing thereon, were entirely uninjured; and some of the writing which was of blue ink, was also left wholly uneffaced and not in the least faded. Said safe was by the fire heated perfectly red hot, and I do not hesitate to say, that said safe is a perfect security against fire. But the safe tumbled over during the fire, and being heated red hot, the outer sheeting of the door became pressed in, and the bolts of the lock bent, so that it could not be unlocked, and I had to have it broken open.

JOHN BATTAILLE.

Benton, Miss., December 27, 1845.

Still other Tests in the Great Fire of July 19, 1845.

The undersigned purchased of A. S. Martin, No. 138½ Water street, one of Rich's Improved Patent Salamander Safes, which was in our store, No. 54 Exchange place. The store was entirely consumed in the great conflagration on the morning of the 19th inst. The safe was taken from the ruins 52 hours after, and on opening it, the books and papers were found entirely uninjured by fire, and only slightly wet—the leather on some of the books was perched by the extreme heat.

Richards & Cronkhite.

New York, 21st July, 1845.

One of Rich's Improved Salamander Safes, which I purchased on the 2d of June last of A. S. Marvin, 138½ Water street, agent for the manufacturer, was exposed to the most intense heat during the late dreadful conflagration. The store which I occupied, No. 46 Broad street, was entirely consumed; the safe fell from the 2d story, about 15 feet, into the cellar, and remained there 14 hours, and when found, I am told, and from its appearance afterwards, should judge that it had been heated to a red heat. On opening it, the books and papers were found not to have been touched by fire. I deem this ordeal sufficient to confirm fully the reputation that Rich's safe has already obtained for preserving its contents against all hazards.

(Signed,)

WM. BLOODGOOD.

New York, 21st July, 1845.

The above safes are finished in the neatest manner, and can be made to order at short notice, of any size and pattern, and fitted to contain plate, jewelry, etc. Prices from \$50 to \$500 each. For sale by

A. S. MARVIN, General Agent,

138½ Water st., N. Y.

Also by Isaac Bridge 76 Magazine street, New Orleans.

Also by Lewis M. Hatch, 120 Meeting street Charleston, S. C.

16 U

CUSHMAN'S COMPOUND IRON RAILS

etc. The Subscriber having made important improvements in the construction of rails, mode of guarding against accidents from insecure joints, etc.—respectfully offers to dispose of Company, State Rights, etc., under the privileges of letters patent to Railroad Companies, Iron Founders, and others interested in the works to which the same relate. Companies reconstructing their tracks now have an opportunity of improving their roads on terms very advantageous to the varied interests connected with their construction and operation; roads having to use flat bar rails are particularly interested, as such are permanently available by the plan.

W. Mc. C. CUSHMAN, Civil Engineer,
Albany, N. Y.

Mr. C. also announces that Railroads, and other works pertaining to the profession, may be constructed under his advice or personal supervision. Applications must be post paid.

RAILROAD IRON AND LOCOMOTIVE

Tyres imported to order and constantly on hand by

A. & G. RALSTON

Mar. 20th 4 South Front St., Philadelphia.

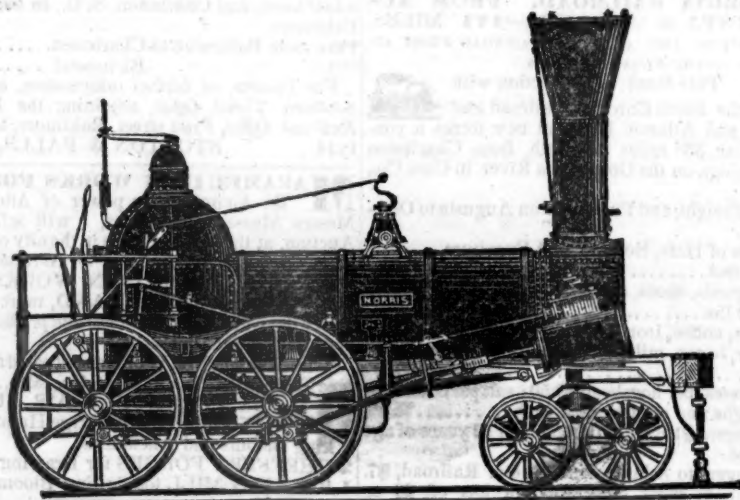
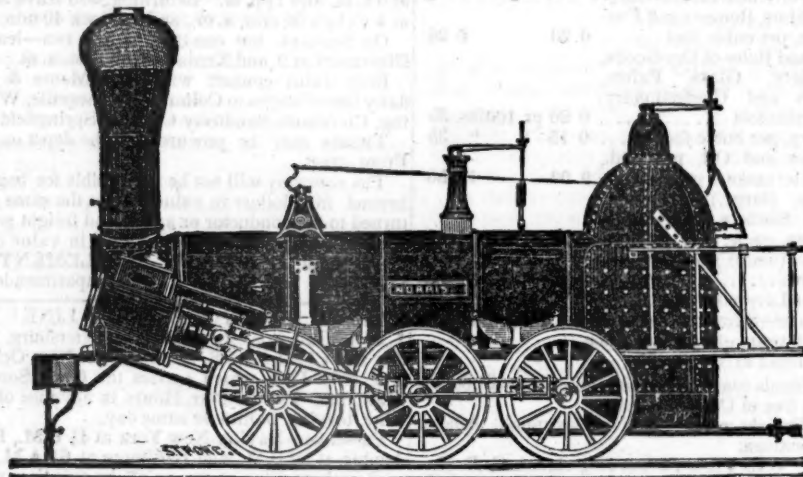
THE NEWCASTLE MANUFACTURING
Company continue to furnish at the Works, situated in the town of Newcastle, Del., Locomotive and other steam engines, Jack screws, Wrought iron work and Brass and Iron castings, of all kinds connected with Steamboats, Railroads, etc.; Mill Gearing of every description; Cast wheels (chilled) of any pattern and size, with Axles fitted, also with wrought tires, Springs, Boxes and bolts for Cars; Driving and other wheels for Locomotives.

The works being on an extensive scale, all orders will be executed with promptness and despatch. Communications addressed to Mr. William H. Dobbs, Superintendent, will meet with immediate attention.

ANDREW C. GRAY,
President of the Newcastle Manuf. Co.

NORRIS' LOCOMOTIVE WORKS.

BUSH HILL, PHILADELPHIA, Pennsylvania.



MANUFACTURE their Patent 6 Wheel Combined and 8 Wheel Locomotives of the following descriptions, viz:

Class	1,	15 inches Diameter of Cylinder,	× 20 inches Stroke.
"	2,	14	" " × 24 " "
"	3,	14½	" " × 20 " "
"	4,	12½	" " × 20 " "
"	5,	11½	" " × 20 " "
"	6,	10½	" " × 18 " "

With Wheels of any dimensions, with their Patent Arrangement for Variable Expansion. Castings of all kinds made to order: and they call attention to their Chilled Wheels, for the Trucks of Locomotives, Tenders and Cars.

NORRIS, BROTHERS.

Charleston and Wilmington Railroad.

In pursuance of the call of the mayor, a large meeting of the citizens of Charleston, of the Neck and the adjacent parishes was convened this day in the city hall, "to confer on the measures necessary to complete the connection by railway, between Charleston and Wilmington, N. C."

His honor the mayor was called to the chair, and William Blanding, Esq., appointed secretary.

The chair laid before the meeting the following address to the citizens of Charleston, from the committee appointed by the citizens of Georgetown, convened on the 6th of July last, in relation to this project: which was read and ordered to be printed:

Fellow Citizens of Charleston: The undersigned were appointed by a district meeting, held in Georgetown, on the 6th of July last, to address you on the subject of the construction of a railroad from your city to the North Carolina line, by the way of Georgetown.

Some years ago, at the instance of citizens of Georgetown, a charter was granted by the general assembly "to authorize the formation of the Charleston, Georgetown and All Saints railroad company," but the amount of subscriptions was not sufficient to secure the charter, and it lapsed.

The object of those whom we on this occasion represent is, to revive the charter just mentioned, and to solicit your co-operation in keeping it alive, and in constructing the proposed road.

We are satisfied that the proposed railroad would be highly advantageous to the interests of the district in which we reside; but are not less firmly persuaded that your city has the largest interest in securing the object designed.

As you have but few manufacturers among you, your city may be regarded as solely and essentially a place of commerce. And, from the depth of water at your bar, and from other causes you command, and must continue to command, the foreign commerce of South Carolina and of portions of North Carolina and of Georgia. How much more of that commerce you shall draw to yourselves, and how much of that of other sections, within a reasonable range, you shall constitute your city the chief emporium, must depend entirely upon your own exertions. Your commercial importance, you owe mainly, if not solely, to your depth of water, when we look only to what nature has done for you. Your water communications with the interior are of trifling moment. You must make your communications, or you are lost. Had you rested satisfied with your merely natural advantages, instead of participating in the animating contest for commercial superiority, sad, indeed, would have been your present condition. We rejoice that you did participate in that contest; and your present railroad, with its extensions, is honorable to your enterprize and commercial sagacity.

You have lost, in a great measure, your West India trade, and your direct trade with Europe. You have borne your full share of

the ills which have flowed in no stinted tide from the anti-commercial policy, which for the last 30 years, has been the bane and disgrace of legislation at Washington. But if you are alive to your own interests, and ready to make the proper efforts, you may recover that commercial importance, the decay of which has come partly from the operation of natural causes, and is partly to be imputed to the folly of federal legislation.

You have done a great deal already by extending your business connections even to the verge of the valley of the Mississippi, but you have not yet done enough to preserve your relative commercial importance in our confederacy of states. If Baltimore, New York or Boston, had rested in a state of supine inactivity in respect to their communications with the interior, is it to be for a moment supposed that they would at this day have attained their present high condition of prosperity? Surely not. The truth is, that those who have watched over the commercial interests of those cities, have seen the necessity of efforts, in order to secure the benefits that natural position may first have given to each particular locality. And those efforts have not been wanting. Witness the herculean task that Baltimore has assigned herself in extending her business connection with the west. The great canal and railroads all pointing towards New York. Those of Massachusetts, and the attempt of Boston to participate in the advantages, if not appropriate to herself the entire benefit of the great westerly highway of New York.

One great difficulty you have to contend with, is a want of variety in the objects of commerce. This has been a stumbling block in your way; and it is to be removed only by extending and multiplying your communications with the country, of which nature points you out as the commercial centre.—There is another consideration, too, which at this moment should have great weight in determining your future course of action in relation to the interests of your commerce. Among the very few acts of the federal government in reference to our commerce, which have not had a tendency to depress and to destroy it, is an act of the present session of congress, whereby the warehousing system is re-established. The advantages of this act will manifestly be lost to you, or greatly impaired, if you do not extend and multiply your commercial relations with the rest of the country. There can be no other means of availing yourselves fully of the benefits of its provisions.

The auguries of the day are in our favor. Great Britain, standing as she does, at the head of the commercial world, has set the example of free trade, and has thereby vindicated her claim as leader in the van of human civilization. That our government will have the wisdom to follow the glorious example thus set, we have no very sanguine expectation. But those who wait calmly for the great day, when the shackles shall be stricken from our commerce, and expect with folded arms that the direct trade by the southern passage shall be again poured into their

laps, resemble in their wisdom the clown who was waiting until the stream should flow by. Should the great day of commercial freedom ever dawn upon us, we trust that your city—our city, dear to our love for what she has been and is, and to our hopes for what she is to be—will receive a large share of its blessings; but we are persuaded that free trade alone cannot restore to her her former relative importance in the world of commerce.

We have thought it not impertinent to the objects of our appointment, to urge upon your consideration these few topics on the subject of your business connections generally. We now address ourselves more particularly to those which pertain to the special matter in hand. It has been found after many years' experience in the railroads of our southern country, that produce ministers mainly to their support. It has been further proved that produce gives rise to the transmission of merchandize, yielding a more valuable freight than the produce which purchases the merchandize sent back in exchange. And that railroads draw by an irresistible attraction to themselves, everything within an extended range.

The railroad we propose to you to aid us in constructing, will bring you into almost immediate contact with some of the finest and most productive districts of our state, and will give you completely the command of the trade of eastern North Carolina, it will expedite the transmission of your mail, and the transportation of travellers seeking your city or places further south. If it is constructed from any point within the parishes of Kingston or All Saints, co-terminus with North Carolina, there can be no doubt that our sister state will connect her railroad with it, and that therefore it will be but the completion of a system of railroads already in operation. If, through our culpable supineness, this link in the great chain of seaboard communication is left unforged, there can be little doubt that the North Carolina improvements will seek a connection higher up with the lines of railroad towards the southwest. That this course would operate disastrously upon our interests and those of your city, you must feel very well assured. You would suffer in your commerce, you would suffer in the ruin of your road below Branchville, you would suffer in lack of mail expedition, and in all of the numberless ramifications of your varied pursuits.

We conjure you, therefore, by all of the considerations that can have weight with a community like yours, to aid us with your voices for improvement, to aid us with your zeal, to aid us with your capital in accomplishing this work.

The tract of country through which we propose constructing this road, offers advantages unsurpassed on our continent for cheapness of construction. It is almost a dead level, abounding for the most part with timber for construction and repairs, and with fuel. And there is no lack of laborers on the line of the route, whose services could be secured at a very reasonable rate of wages.

In conclusion, we pray that you will at least favor our project so far as to take into serious consideration the few topics we have thus brought before you, out of the many that might be urged, and to unite your counsels with ours, for our common benefit.

For the committee,

JOHN IZARD MIDDLETON, *Chairman*.
Georgetown, August 10, 1846.

Col. Gadsden then offered the following resolutions, which he urged in a few pertinent remarks:

Resolved, That a committee of five be appointed to collect information, and to report at the adjourned meeting in October next on the expediency and practicability of a railway from Charleston to Wilmington, with an approximate estimate of the probable cost of the same, and that the said committee publish their report in the city papers as soon as it is prepared.

Resolved, That a committee of correspondence, to consist of ten individuals, be nominated, to confer with the authorities of Wilmington and the citizens of the counties of Dupin, Sampson, Wayne, Edgecombe, Nash, Halifax, Brunswick, Bladen and Columbus, North Carolina; and with the authorities of the districts and parishes in South Carolina; inviting them to send delegates to the adjourned meeting in October next—and to come prepared with an exhibit of the extent to which the inhabitants of those cities and sections of country are disposed and prepared to co-operate in the construction of a railway to connect the Wilmington and Roanoke with the South Carolina railroad at Charleston.

Resolved, That the same committee be requested to direct circulars to the president and directors of such railroads, as may be interested in the removal of the existing impediment to a continuous railway from the eastern extremity to the most southern section of the Union; and to invite them to name representatives to the meeting in October, and to co-operate by subscription to the aforesaid enterprise of common benefit to all.

Resolved, That a committee of five from each ward of the city of Charleston, ten from the neck, and three from each of the parishes of Christ Church, of St. John's, and of St. James', Santee, and the adjacent parishes be named, to appeal to the citizens within their respective precincts for such aid by subscription of stock or otherwise as will contribute to the work contemplated; and that the said committee be requested to report to the adjourned meeting in October next on the expediency and practicability of the city and commissioners of cross roads, in their corporate capacities, uniting in whole or in part in the construction of that portion of projected railroad as may run through the limits of the state of South Carolina.

Resolved, That a committee of twenty individuals from the city and neck be appointed to make appropriate arrangements for receiving and entertaining (as may comport with the ancient hospitality of Charleston) the delegates which may assemble at the meeting proposed on the 20th of October next.

Resolved, That this meeting stand adjourned to Tuesday, the 20th day of October next. The resolutions were seconded by Wm. H. Trescot, Esq., and advocated by him and T. O. Ellicott, Esq., in a forcible manner.

Several modifications and amendments were proposed by Hon. Ker Boyce, Dr. Thomas G. Prioleau and Edward McCrady, Esq., which was severally concurred in.

The resolutions being put separately, were then adopted without a dissenting voice.

The appointment of the several committees created by the resolutions, was referred to the chair, and will be announced through the public prints.

The meeting then adjourned.

JOHN SCHNIELE, *Mayor, Chairman*.
WM. BLANDING, *Secretary*.

Good News from Montreal.

Our copious extracts from the proceedings of the railroad meeting at Montreal on Saturday last, contain the interesting information that the company in Canada will go on immediately, with their part of the work. The great meeting in the *Camp de Mars*, and the special efforts that followed the resolutions of that assembly, were successful not only in adding largely to the subscriptions, but also in widening and deepening the feeling of interest in the work. The shareholders in resolving to go on, as far as their means will permit, appear to have been encouraged by the increased general favor, to believe that capital would be furnished for such a work, as fast as it should really be needed. In addition to this, they have facts on which to rest the conclusion, that the first sections of the road, will of themselves yield a remunerating return.—*Portland Advertiser*.

General Meeting of the Proprietors of the St. Lawrence and Atlantic Railway.—A general meeting of the proprietors, pursuant to public notice, was held in its rooms, in Little St. James' street, on Saturday afternoon. The meeting was numerous and highly respectably attended, and the proceedings were marked by unanimity.

The Hon. Geo. Moffatt was called to the chair, and briefly explained the cause and object of the meeting. It was called, in pursuance of notice signed by proprietors of one hundred and fifty shares, as defined by law, and its object was to decide whether the project should go on or be legally wound up. At the meeting in the *Camp de Mars*, it was agreed that means should be taken to inspire the town generally with a stronger interest in the fate of that undertaking than had yet been manifested. He need not remind them of the gratifying character of the assembly to which he referred. In addition to that great demonstration of public feeling, a more solid interest had been manifested by a subscription of upwards of 400 shares, as would appear from the report about to be read to them.—Every one seemed now sensible of the importance of the undertaking—important as enabling us to retain and improve our present position—important as giving employment, commerce and trade, and being the means of raising the public revenue—and important, as he had no doubt it would be,

to the shareholders as a profitable investment. As this was a special, not a general meeting, he apprehended that they must confine themselves solely to the matter for which they were called. Its decision would bind all the shareholders present or absent. He, himself, could not doubt what the decision would be—it would be that, though their means were not yet adequate to make the whole line, they must make a beginning, and afterwards find means to carry it on to the boundary.

The secretary then submitted the report of the directors, of which we extract all the material parts.

The board of directors of the St. Lawrence and Atlantic railroad company, beg leave to

REPORT,

That since the meeting of proprietors held on the 30th ultimo, 1,410 shares have been subscribed of the company's stock, conditionally on the work being immediately commenced. The directors have gratefully to acknowledge the strenuous assistance rendered to them by the committee appointed in the last meeting to secure additional subscriptions—and they are happy in stating their belief that the information thus conveyed to the public has produced a thorough conviction of the vital importance of a railroad, and of its decided claims to be regarded as a profitable investment for capital, independent of all other motives for its formation.

The present position of the company's subscription list is—3,964 shares held in Canada, 1,000 subscribed on account of future contracts for work on the road, about 650 subscribed in England, by the scripholders there, and 1,983 held by scripholders in Gt. Britain: giving a total of shares, 7,597.

Of this number, the directors regard as available for the immediate prosecution of the work—3,964 shares held in Canada, 650 shares subscribed in England, 750 shares of those subscribed on account of future contracts: making a total of 5,364 shares, or £268,200.

At the last meeting of the proprietors, the directors stated, that on the result of the appeal to the public, then suggested, being ascertained, they would be prepared to recommend either the immediate winding up of the undertaking, or its energetic prosecution.—And it is now their duty, in laying the foregoing statements of affairs before the proprietors, to give it as their decided opinion that it is expedient, at once, to enter upon the construction of a portion of the railroad, leaving it, however, to the proprietors to instruct them definitely thereon.

On this point the directors would remark that, independent of the English scripholders, they have ample means to construct from 50 to 60 miles of the railroad; that this portion of the road would, in their opinion, be productive in itself, and would enable the directors to obtain sufficient means to complete the work to Sherbrook, a point about 30 miles from the boundary line, and which, if once attained, the directors feel sufficient confidence in the now awakened feeling in Montreal and the adjoining districts, to believe that the additional amount required to com-

plete this great work will be eventually subscribed.

The directors beg leave to conclude their present report by reporting their recommendation, that, under the now favorable state of public opinion towards this great work, the proprietors should resolve to instruct them to proceed with the construction of the railroad, so far as their present means can be made available for the purpose.

All which is respectfully submitted,
G. MOFFATT, *President.*
Montreal, August 22, 1846.

Benjamin Hart, Esq., moved that the report be adopted; seconded by Major General Evans, and carried unanimously.

Samuel Gerrard, Esq., moved that "the proprietors learn, with much satisfaction, the more favorable position in which the affairs of the corporation now stand, and that, believing the interests of the proprietors will be best promoted by an immediate commencement of the railroad, the board of directors be, and they are hereby, authorized and instructed to put such portion of the work under contract as they may consider most expedient, completing the railroad to such point as the means at their disposal will permit."

G. Elder, Esq., seconded the motion. He thought the time for acting had come, and that for speaking had past, and that he trusted there would be no hesitation. If they confined themselves to intending to begin, they would never begin; let them start at once. Even without the English shareholders, they had now 5,500 shares taken; nearly half of the whole. As for the evils that would befall the city if the road was not made, that ground had been already sufficiently gone over. Let us all make up our minds to the work, and devote all our energies to it.

The motion was put, and carried unanimously.

After some remarks from the Hon. R. U. Harwood and other gentlemen, expressive of confidence in the undertaking, the meeting broke up.

American and European Railways.

The *Paris Constitutionnel* contains an interesting article upon the subject of railroads in America and Europe, which gives some statistics and particulars of importance to all who feel an interest in railroad matters. We publish the article below, and commend it to the especial attention of our readers:

At the close of the year 1845 there were 16,400 kilos., (or nearly 9,900 miles) of railway open to passengers in Europe and the United States of America. The cost of their construction amounted to the sum of 3,937,000,000f., or £157,480,000 sterling. The expense of a kilo. (rather more than half a mile English) of railway may be consequently estimated at an average of 244,754f.; and if we calculate the amount of population in the two quarters of the globe just named at 234,000,000, we shall find that a capital of 19f. 55c. for each individual has been already expended towards railway construction. The capital however, laid out in constructing this distance of railway varies per each individual, according to the advancement which any particular country may have made in adopting

this mode of conveyance. In Belgium it may be stated at about 30f. 10c. each individual; in England, 74f. (£2 19s. 2d. sterling); in Holland, 10f. 85c.; in Germany 8f.; in the United States 49f. 57c.; in France 9f. 70c.; in Germany, Italy, Cuba, and Russia in Europe, where railways have as yet made no considerable advance, at an average of 3f. 76c. If we wish to arrive at the comparative cost of railway construction in different countries, estimating such cost per kilo., we shall find it to be in Belgium 261,000f.; in Great Britain 550,000f.; in Holland 240,000f.; in Germany 160,000f.; in the United States 113,000f.; in France 335,000f.; in Denmark 118,000f.; in Italy 200,000f.; in Cuba 190,000f.; and in Russia 280,000f. The following is a table showing the total expense of railway construction in the countries just named up to the close of the year 1845:

	Kilometres.	Francs.
Belgium.....	559.....	145,984,014
England.....	3,638.....	2,000,000,000
Holland.....	154.....	32,340,000
Germany.....	3,140.....	502,400,000
United States.....	7,500.....	846,075,000
France.....	986.....	330,000,000
Denmark.....	106.....	12,508,000
Italy.....	228.....	45,782,000
Cuba.....	37.....	7,030,000
Russia.....	52.....	14,560,000
Total.....	16,400.....	3,936,989,414

The improvements which have gradually taken place in the speed of locomotives since their first application to road travelling, have been very remarkable. In 1825 the first locomotives in England, with 40 tons power, travelled at the rate of only 10 kilos. per hour (6 English miles.) So great was the improvement in a few years, that in 1829 the Rocket travelled at the speed of 25 kilos. per hour, (15 English miles); in 1834 the speed of the Firefly was 34 kilos. (20 English miles); in 1839 the North Star moved with a celerity of 62 kilos. per hour, (37 English miles); and at the present moment locomotives have arrived at a speed of 70 kilos. (42 English miles.) During the same period, (since 1825,) the quantity of fuel required for the propulsion of locomotives was diminished 5-6ths, that is, 6 tons of coal were consumed formerly for one at the present moment. The mean speed upon several of the principal English lines is as follows: Upon the North Midland and Eastern Counties, 58 kilos. per hour, (33 English miles); upon the Great Western 53 kilos. (31 English miles); upon the London and Birmingham line, 43 kilos. (25 English miles); upon the Manchester and Leeds, 30 kilos. (24 English miles); and upon that of the Birmingham and Gloucester, 38 kilos. (24 English miles.) In taking a glance over the general European continent, we find that the development of the railway system in Italy has been exceedingly tardy; but a better state of things is about to intervene. If the states of the church and several of the second-rate principalities are excepted, all the remaining states of the Italian peninsula are now lending a hand to the works. The first lines undertaken on the other side of the Alps, and which are now open for traffic, are the Milan line and that of Naples. Various important projects have been recently set on foot, and,

as already observed, the work of improvement is proceeding with great activity. Three grand government lines are now being deliberated upon—the Genoese line, the Turin line, and the Lago Maggiore line. These will connect the metropolis of the Italian states with the sea, with Switzerland, and northern Italy generally. For communication with Lombardy it will be necessary to extend the Milan line above alluded to, as far as Tesin. It is also proposed to connect Savoy with Piedmont by tunnelling the base of the Alps immediately contiguous to the defile of Mont Cenis. A line from Turin to Chambéry is now under discussion, and, if carried into effect, will be one of the most astonishing works ever completed by the hand of man. Besides the government lines just alluded to, there are others of second-rate importance, which are immediately to be commenced. Petitions have been addressed to government, praying for the establishment of lines between Turin and Pignerol, between Turin and Saualgio, and from Sasal to Valance.

A line from Turin to Milan, pursuing its course on the left bank of the Po, will be shortly proceeded with. In Lombardy the affairs of the line between Milan and Venice are going on rapidly. This line will have a sort of zigzag course, and will renew the ancient connection which subsisted between these districts of Italy. The second-rate lines of the Lombardo Venetian kingdom are those which proceed from Milan to Como, and the towns of Bergamo, Mantua, and Cremona.—Upon the completion of the various lines at present in progress in the interior, a communication or conjunction will be established between the Lombardo Venetian lines on the one hand, and those which will eventually be constructed in the provinces situate on the left bank of the Po; and on the other hand, with the German frontier, of which Trieste is the extreme point. The line from Trieste to Vienna will place Germany in direct communication with Italy; and it will be the interest of Austria to promote the carrying of this project into effect. Upon the right bank of the Po, a company at present solicits authority to construct at its own cost, a line from Ancona to Bologna, with the intention of continuing it as far as Modena and Parma. Unless opposed by the holy see, this project will be immediately commenced. In the event of its being carried into effect, the valley of the Po will be traversed by two great lines, of which one will terminate at Venice, the other at Ancona. In Tuscany the line from Leghorn to Florence is being rapidly proceeded with. It is already open from Leghorn as far as Pontadera. Two companies have obtained leave to commence lines from Lucca to Pisa, and from Sienna to Florence. The latter line is known under the designation of the "Tuscan Central." In the kingdom of Naples the lines from the capital to Castellamare and Capua are now open for traffic. The Capuan line will yet be extended to the frontiers of the states of the church and will ultimately become a portion of the line destined beyond a doubt, at no distant day to connect Rome and Naples.

Little Miami Road.

The receipts upon this road exhibit a very steady and prosperous increase of business—and the opening of the road to Springfield proves very advantageous to the line. We learn from the Cincinnati papers that the number of passengers upon this route since the opening of the Springfield extension, has been seventy-five per cent. additional already. The Cincinnati Gazette says:

"At present the freight train runs through but three times a week; but as produce is rapidly accumulating at all points on the road, a daily train of freight cars will be started on the 1st of September, to run through to Springfield; and as soon as a new locomotive can be finished, an extra train will be put on, to run as far as Todd's Fork, to accommodate the way business exclusively.—Three locomotives are building, two in this city by Mr. Harkness, and one at Patterson, N. J. Two passenger cars have also just been built at the east, and are daily expected; they combine all the improvements introduced on the eastern railroads.

"To show how this road is attracting business, in bringing down live stock, it may be mentioned that hogs are almost daily driven from Dayton to Xenia; at the latter place they are put on the freight cars at 5 a.m., and reach this city in season to be driven to the slaughter yards at Brighton the same evening—a distance of nearly seventy miles.

"The Mad river railroad is now open to Kingston, and by the 1st of November will be extended to Bellefontaine, thus reducing the distance to be travelled by stages from this city to lake Erie, to about thirty miles."

Miscellaneous Items.

At the annual meeting of the stockholders of the Hartford and New Haven railroad, the following gentlemen were chosen directors for the year ensuing, viz: Charles F. Pond, David Watkinson, Hartford; J. Boorman, E. Peck, C. Vanderbilt, New York; Ezra C. Reed, New Haven; J. S. Brooks, Meriden; F. R. Griffin, Guilford; C. W. Chapin, Springfield. At a subsequent meeting of the directors, Charles F. Pond was re-elected president; Jas. H. Wells, treasurer; and Horatio Fitch, secretary.

The Air Line Railroad.—We understand from good authority that on the first day of opening the subscription books to the stock of the New York and Boston railroad, the people of Middletown took shares to the amount of *three hundred and fifty thousand dollars!* and that they will go up to half a million. This is doing a brave business for a little city like Middletown—and shows that they are determined in the matter. Indeed there is little doubt of the early completion of this work, which must prove a valuable investment. The great amount of travel on the New Haven and Hartford road, shows what this projected road is to become, when travellers can go from New York to Boston, at a rate of 50 miles the hour—the direct route.—*New Haven Reg.*

Railroads in Carolina and Georgia.—The Macon Messenger gives the following statement of the railroads now in operation in these two states, viz:

Central railroad, from Savannah to Macon, 190 miles.

Macon and Western, from Macon to Atlanta, 101 miles.

State, or Atlantic and Western, 80 miles.

Georgia, from Augusta to Atlanta, 171 miles.

Athens branch, 40 miles.

Augusta to Charleston, 136 miles.

Branch road to Columbia, 58 miles.

Making a grand chain of communication of 776 miles.

Avalon Railroad Iron.—The Covington manufacturing co., at their Avalon works near this city, are now delivering, under their contract, the iron for the

Baltimore and Ohio railroad. The iron is made exclusively of the best quality of Baltimore charcoal pig iron. The fixtures by which it is manufactured are of the most approved description, and embrace several original improvements, by means of which nearly every bar is made perfect. These rails are of the U or bridge pattern, and their proportions are such as to combine great utility, with extreme beauty and symmetry. Altogether it is considered a most successful effort; and for the great exertions by which this result has been produced in a comparatively short period of time, the contracting company are entitled to much credit.—*Balt. Pat.*

Railroad Accident.—We understand that on Wednesday last, as an up freight train on the Central railroad was passing over Williamson's bridge, about sixty miles this side of Macon, the bridge gave way and precipitated several of the cars some ten to fifteen feet into the creek or ravine below. The train, our informant states, was very heavily laden with materials for the Macon and Western road. The front engine, and perhaps one or two cars had passed safely over, when the work gave way. We are glad to add, that no one was injured, and that the damage from breakage will not be as great as might have been anticipated. Our informant seems to think that the immense weight of the train was the sole cause of the accident—upon this however, we cannot speak advisedly, as we have no positive information further than that two locomotives were employed in its transportation. The passengers from the west were transferred to a freight car, which reached the city a few minutes before 3 o'clock yesterday morning.—*Savannah Repub.*

Another.—On Saturday, Aug. 22d, says the N. Y. Courier, the train on the Georgia railroad were thrown off the track about two miles above Montgomery, and precipitated down an embankment of some 15 feet deep. There were 10 or 15 passengers in the cars, not one of whom, strange to say, was seriously injured.

A Remarkable Mineral Spring.—It may not perhaps be generally known, even to our own citizens, that there is in the town of Rigga, one mile east of Churchville, on the farm of Linus Pierson, a mineral spring, the gases from which are sufficiently combustible to burn as clear and brightly as a lamp, at all times of the day and night, and which is never exhausted. The spring is located near the bathing house on the farm, and a tube has been constructed leading from the spring to the rooms, by means of which the house is made sufficiently light without the use of lamps.

Some time ago the state geological surveyors paid this spring a visit and analyzed the gas, which was found to be composed of sulphureted and carbonated hydrogen. The water is strongly impregnated with iron.—*Rochester Daily Adv.*

Uses of the Telegraph.—The journeying correspondent of the Newark Daily Advertiser has the following statement upon the convenient uses of the magnetic telegraph:

An incident in our journey a few days ago serves to show the usefulness of the telegraph. A lady left a valuable article of dress in one of the cars for the west on leaving the railway at Utica for a trip to Trenton Falls.—

The cars were scarcely out of sight when it was missed. The fact was instantly communicated by the wires to the next depot, where the garment was taken from the car, and on our return from Trenton, the following day, it was found at the office in Utica.

The editor of the Buffalo Commercial Advertiser has seen a beautifully finished car from the manufactory of Messrs. J. Gould & Co., of Albany, designed for the Mansfield and Sandusky railroad, and which will be shipped on board the schooner *Merchant*, by Messrs. D. N. Barney & Co., with as little delay as possible. The seats, of which there are 26, are of mahogany, exquisitely finished with tempting looking cushions, and on each side of the car are conveniences for suspending hats, bonnets, umbrellas, etc., a very great desideratum indeed to the travelling community.

Atlantic and Ohio Telegraph.—The directors have made choice of JOHN B. TREVOR, Esq., as *treasurer* of this company. The Philadelphia Sentinel learns from the president, Hugh Downing, Esq., that the line will be pushed forward with all possible speed to the Ohio river. Efforts are making to reach Cincinnati before January.

(Official) Reading Railroad.

A comparative statement of the business on the Philadelphia and Reading railroad for the week ending—

	Sept. 7, 1844.	Sept. 7, 1845.	Sept. 6, 1846.
Passengers	17,118 39	28,327 42	\$46,549 13
Coal trans.—tons,	12,638	21,692	28,178

The amount of coal brought to market by this route, during the week ending the 10th instant, and since the first of January, has been as follows:

This week, 28,339—previously, 788,487—total, 816,327.

The Lehigh Coal Trade.—The following is a statement of the amount of coal sent to market by the Lehigh canal during the week ending the 8th inst., and since the opening of the navigation:

This week, 18,247—previously, 331,148—total, 349,396.

Erie Railroad.—The earnings of the eastern division of the Erie railroad for the month of August, 1846, were as follows:

From freight.....	\$10,545 53
Passengers and mail.....	6,141 23

Total.....	16,686 76
Same time last year.....	16,650 86

Increase.....\$35 90

Sale of the Railroad.—The Portsmouth and Roanoke railroad was put up at auction yesterday and bid off by the agent of the board of public works, in behalf of the state, for \$60,000. There were only two bids besides those of the state; one by the town of Portsmouth and one by a gentleman from the north desirous of purchasing for the iron rails.

Checking the Motion of Railway Cars.

I have a suggestion to make in reference to checking the motion of cars upon railways, which may be useful to railroad companies. It is this: provide each wheel with a box, or other convenient vessel, containing ten pounds of oil, in a semi-fluid state placed in such a position that the oil could be discharged upon each and all of the wheels at the same instant—the result would be that the wheels would revolve without moving the cars. The experiment is well worth trying, and I make this suggestion believing that the public may be benefited thereby.

E. MERIAM.

Brooklyn Heights, Sept. 15, 1846.

Correspondents will oblige us by sending in their communications by Tuesday morning at latest.

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AMERICAN RAILROAD JOURNAL.

PUBLISHED BY D. K. MINOR, 23 Chambers street, N. Y.

Saturday, September 19, 1846.

NEW YORK AND ERIE RAILROAD
Company Notice. The Stockholders of the New York and Erie Railroad Company are hereby notified, that the annual election for Directors of the company will be held at the office, No. 45 Wall st., in the city of New York, on Tuesday, the 15th day of October next, from 10 o'clock, A.M., to 3 o'clock, P.M.

The Transfer Books will be closed from the 22d of September until the day after the election.

By order of the Board of Directors,
NATHANIEL MARSH, Secretary.
New York, September 12, 1846. 4138

An instrument was shown to us last Thursday, called a "Horizontal, Inclined Plane and Plumb Level," the invention of Mr. A. Gerard, of Mobile, Ala., for which he has obtained a patent. It appears to be a very useful instrument for architects, engineers, stone masons, and mechanics generally. It is composed of a rule or rod with a radius (furnished with two spirit levels) attached thereto by means of a hinge, and moving on a graduated quadrant.

When closed, the instrument forms a level, when opened at right angles it serves for plumbing—and any inclined plane or level may be formed by placing the radius or arm at the required angle. A chart for ascertaining angles and distances without calculation, accompanies it.

Hunt's Merchants Magazine for September, contains several articles upon the subject of railroads, which are worthy of the attention of the readers of that excellent periodical. One of these, that on the administration of railroads of Massachusetts, with reference to the rates of freight and fare, by E. H. Derby, Esq., deserves a few remarks at our hands.

The whole history of the low fare policy on the eastern roads is well developed and had it not been presented to our readers in all its detail we should copy a portion of Mr. Derby's paper, as being one of the best abstracts we have seen.

With Mr. Derby's implied comparison between himself as founder of the low fare policy, and the author of the custom house and postoffice reforms in Europe, we find fault, both as to the taste of the thing and as to the matter of fact that Mr. Derby is the author of the low fare system. That gentleman undoubtedly labored earnestly in the cause, but did not others do the same? It so happened that the issue between the two parties was joined in the case of the Western road, but the main substance of the arguments of the low fare party on this issue were novelty—and the facts presented by them were collected

by those who are not admitted to a seat in Mr. Derby's temple of fame.

Erie Railroad.

We learn from the N. Y. Express, that "the directors of this company are going on with it in the right way to accomplish the great object of the undertaking. The work on the road to the valley of the Delaware river is already contracted for, and a portion of it will be completed early this fall. Proposals for grading 133 miles more are advertised for which will carry the road to Binghamton—two hundred and twenty-five miles from New York. From Binghamton to lake Erie the work is more than half done. The citizens of New York may congratulate themselves that this important work, now freed from the embarrassments with which it has been surrounded for so many years, will be steadily prosecuted to its completion. In less than three years we hope to ride over it to lake Erie"—and we hope to be of the party.

Central Michigan Road.

This road is offered for sale, in accordance with a resolution of the last legislature of Michigan. An invitation is especially directed to capitalists in the east to embrace the opportunity offered, and the time of sale is limited to the 28th of September. A correspondent of the Albany Argus, who has recently passed over the road, says that in eight months it has netted more than a hundred per cent. from last year, and that its condition will compare well with the railroad from Albany to Buffalo.

Wm. Gooding, engineer of the Illinois and Michigan canal, advertizes for 1,000 laborers, and 100 stone cutters, to whom good wages and constant employment will be given.

A letter from Sault St. Marie, published in the Montreal Herald states that the northern shore [British side] of lake Superior is as rich, if not richer, than the southern, in copper and silver ores. Four companies have been on the ground this season exploring and making their locations.

A late London paper says that the amount empowered to be raised by the railway acts, which received the royal assent to the 3d Aug. for new lines extensions, and enlargement of stations, etc., is estimated at one hundred and fifty millions sterling!

Low Fares upon Railroads, And the Camden and Amboy Railroad.

Since the publication of our last number, we have devoted some time to the further examination of a pamphlet (which has been some time in hand) put forth by the "directors of the Camden and Amboy railroad company, to the people of New Jersey," etc., and, agreeably with our promise, we proceed to offer our opinion upon the subjects therein referred to.

After a careful perusal of the pamphlet in question, we have no hesitation in saying, that this publication is altogether one-sided in the opinions and arguments advanced, while the whole spirit of the "address" is simply a sort of history of the "Camden and Amboy railroad," and "Delaware and Raritan canal companies"—from 1830 to 1845—backed by some fallacious doctrine touching the subject of the opposition of those interested in these public highways, regarding the principle of low fares as applying especially to these routes.

The pamphlet alluded to commences by informing the public that "the subject of a canal, to unite the waters of the Delaware and Raritan rivers, had occupied the attention of the people of New Jersey for half a century"—and that, after legislating upon the

subject for some twenty-six years, a charter was granted in 1830 to the present "Delaware and Raritan canal company," who have accomplished the project. At "the same session of the legislature, a charter was also granted to a company, to make a railroad from Camden to Amboy"—and in the course of the next year (1831) "the two companies were united, by an act of the legislature, and were made one joint company."

The pamphlet then goes on to state at length the numerous difficulties which attended the establishment of this route—the embarrassments attaching to filling up the subscriptions for stock, and the varied ups and downs which followed upon getting them into operation—and the principal aim and energies of the managers of this "joint company" appear to have been, to establish the route upon what they are pleased to term the *protective principle*; which should give the exclusive right of way through New Jersey, and should secure to them, for a limited number of years, the monopoly of the travel across that state. After much of this "legislation" referred to, an act was obtained, and became a law, by a vote of 31 to 11 in the assembly, and 9 to 4 in the council, containing a provision (to use the words of the pamphlet) of the most *effective* protection against both canal and railroad competition." By the 17th section of this act, it was provided that "it should not be lawful for any person or persons, body politic or corporate whatsoever, to construct any canal or railway within ten miles of any point of the said canal or feeder, without the consent of the said company, and that it shall be the duty of the chancellor of the state, upon an application made therefor, by bill, in due form of law, by the said company, to issue his injunction to stay, and prevent the construction and erection of any such canal and railway." These were among the first acts passed by the state of New Jersey, in reference to canals or railways, in which the principle of *protection*, or as it is now termed, *monopoly*, was incorporated.

This "legislation" is declared by the directors, in the address before us, to have been "a wise policy," and they contend that without these salutary provisions "there would not have been, at this day, any costly canal or railway in New Jersey!" "This state determined," continues the address, "to have her public works made at private expense—securing at the same time, without any risk on her part, the largest contingent interest." New Jersey has thus realized "the revenue equal to the interest upon one million of dollars," from this joint company—and finally, through the exertions of private interest, the state secured "a magnificent canal, and a railroad across the state, without incurring the risk of a dollar in their construction, providing at an early day for their resumption by the state, if it should deem it advisable to do so, (which of course would depend upon their productiveness,) and meanwhile deriving from a transit duty on passengers and merchandize, passing over and through these works, a revenue far exceeding the ordinary expenses of the government of this state."

The address then goes on to "recapitulate" all the embarrassments—prospective losses—"sacrifices," etc., etc., to which the getters-up of this route were subjected—and finally charges the "monopoly" of the matter upon the state of New Jersey in the following terms.

"In order to ascertain who are the monopolists, it will be only necessary to inquire who are the greatest gainers by the monopoly. And here we find no difficulty in coming to an immediate conclusion. The state of New Jersey, without ever having paid one dollar, has derived from her lessees and partners

in this monopoly, two thousand shares of stock, worth as before stated, nearly two hundred and fifty thousand dollars—has received in transit duties and dividends, up to the 1st day of January last, no less a sum into her treasury than five hundred and thirty-one thousand two hundred and thirteen dollars and four cents; and during the last year, fifty-nine thousand four hundred and ninety-seven dollars. Its receipts last year were equal to ONE-FIFTH of the net revenue of the works—the dividends paid during the year 1845 to the stockholders, twenty-eight thousand shares at nine dollars per share, amounted to two hundred and fifty-two thousand dollars, while the state received fifty-nine thousand four hundred and ninety-seven dollars, or nearly twenty per cent. of the whole amount."

In conclusion, it is stated that, "with honorable and patriotic purposes and motives," the originators and projectors of this route "embarked their fortunes, some of them their all, in the hazardous and arduous enterprise of constructing these great works which will descend to posterity as noble and imperishable monuments of the genius and wisdom of the age. They hoped, when their toils and hazards were ended, not merely to reap the ordinary and usual pecuniary reward of successful enterprise, but to receive the approbation of their fellow citizens."

In a memorial to the legislature, (at a subsequent period, and before the route had begun to pay well,) in which they propose to relinquish the affair to the state, they hold the following language. From this memorial we also make the last extract above. They say, notwithstanding all their efforts, and in spite of all their hopes, "they have been disappointed."

"The watchful, perhaps salutary spirit of the age which looked silently upon their long struggle for success, has discovered at the moment they had reached the goal, that in the grants, under which they had prosecuted and completed their labors, there were principles lurking, hostile to popular liberty, and the people's rights. They are branded as monopolists, followed by slander, and reproached with selfish and ambitious purposes. They have borne this injustice in silence, but they desire to be relieved from it; and they come to lay down at the feet of the legislature the grants they have received, with the results of their labors, asking only, what in justice to themselves they are bound to ask, the common recompense of honest industry and enterprise."

This proposition was not accepted by the state, and the company has since pursued the even tenor of its way.

The Camden and Amboy railroad and the Delaware and Raritan canal company were incorporated upon the same day, viz: the 4th of February, 1830. The laws and enactments referring to these incorporations, provide (among other less important matters) that "the treasurer of the company, upon oath, shall make quarterly returns of the number of passengers and the number of tons of goods, wares and merchandize transported upon the roads, to the treasurer of the state, and thereupon to pay the treasurer of the state, at the rate of ten cents for each and every passenger, and the sum of fifteen cents for each and every ton of merchandize so transported thereon. This imposes a rateable transit duty and was not payable till the completion of the road, and the company had nine years in which to complete the road."

"The nineteenth section of the act protects the company against the construction of any other canal within five miles of any point of the canal of the company."

"By the twenty-sixth section, the treasurer of the company is required, after the completion of the canal and feeder, to make quarterly returns of the number of passengers and tons of merchandize transported thereon across the state, to the treasurer of the state; and thereupon to pay to the treasurer of

the state, the sum of eight cents for each passenger, and each ton of merchandize so transported thereon, excepting the articles of coal, lumber, lime, wood, ashes, and similar low priced articles, for which two cents per ton shall be paid."

On the third of February, 1831, the legislature "passed a supplement to the canal charter, and by it extended the time mentioned in the 25th section of their charter, from thirty to fifty years, and prohibited the canal company, or any other person, from constructing any other railroad across the state, between the Delaware and Raritan rivers, within five miles of the canal, until after the time limited for the completion of the canal, which was eight years from the 4th of February, 1830. The extension of the time from thirty to fifty years was granted upon the express condition, that the canal should be constructed from the Delaware to the Raritan, seventy-five feet wide on the water line, and the water therein should be seven feet deep throughout, with locks to be at least one hundred feet in length, and twenty-feet in width in the clear. The canal has been finished, and is in operation."

We have thus given, at considerable length, all the main features which make up this address of the Camden and Amboy railroad company, to the people, from which it will be seen, (in the opinion of the committee in behalf of those interested,) that in the originating, progress and completion of this road and canal, an immense amount of money has been expended, a very natural consequence, we think, resulting from the construction of so important a work! That a vast deal of trouble attended the prosecution and consummation of the undertaking; that, commencing, as it did, in the early days of railroads and other great internal improvements, there was not that confidence in it, prospectively, which would have been desirable; that the managers have contrived, from time to time, to obtain such privileges in their charter, as gives them, for years to come, under existing circumstances, a monopolizing power, the results of which can scarcely be imagined, much less definitely calculated upon; that the monopolizing provisions in said charter are oppressive and excessively burdensome to the travelling community; that the said company are now reaping a golden harvest, notwithstanding all the troubles they have experienced; that they have, decidedly, the best end of the bargain; that they have, by no means, satisfied the public in regard to the main issue of the question between them and the travelling community; and, finally, that in spite of all, in this "address," of argument and sophistry—it does not reach the subject in which the people of New Jersey, as well as all others who travel over the route, are directly concerned, to wit: their exorbitant charge of fare established for passengers between New York and Philadelphia.

We have in this article, extended our remarks to a considerable length, in a preliminary manner, and shall, in another number, endeavor to show the reasons we have for believing this "address" deficient in all we have stated, and we shall also give our reasons why the fare upon this road can and ought to be at once reduced for "through passengers."

Concord Railroad.

We learn from the Boston Times that the special meeting of the Concord railroad corporation, holden in this town on Wednesday last, says the Nashua Telegraph, was very fully attended. The corporation voted about two to one not to construct the Souhegan railroad to Amherst. The motion to indefinitely postpone the whole subject prevailed—yeas 2219,

nays 4286. There was a long and warm discussion among the different interests connected with the Concord road, upon the proposition to subscribe for stock in the Portsmouth and Concord railroad. No decision was come to, and the meeting was adjourned to the first Tuesday in October.

Important Suggestion.

In a late number of the Boston Transcript the following suggestions are made in reference to accidents upon railroads, which should be noted, and considered by those having in charge the duties to which these recommendations refer. They are of serious import, and we trust they may be heeded.

"The late serious accident upon the Erie railroad, says the Transcript, demonstrates the necessity of having no four wheel cars in the train. Had the unfortunate car been an eight wheel car, the coming off of one wheel (which proved so disastrous,) would have been of no sort of consequence.

"Would it not be best for all the railroads all over the country, to make it an invariable rule to have no four wheel cars in the train? An eight wheel car goes much easier on the track, and makes a great saving in the repairs of the road. While on this subject, we beg leave to suggest the great importance of having invariably the baggage car between the tender and forward passenger car. Then in case of accident to the locomotive, or of its going off the track, the tender and the baggage car may be smashed, and yet all the passengers be entirely safe. The baggage car serves if thus placed, as a bulwark against the blow, whereas, if placed in the rear of the train, it operates as a trip hammer to smash the passengers, in case the train is suddenly arrested by an accident.

Locks on Railroads.

"They are beginning to use successfully dry locks on railroads in France, for the purpose of rising from one level to another.—They are said to be cheaper, safer and more easily kept in repair than inclined planes, and their introduction will save much expense in excavations and embankments for railroads. They are serviceable on roads engaged in transporting heavy freight trains."

The Philadelphia Ledger copies the above, and adds that the "principle is not new." Some years ago, "a gentleman exhibited in this city an invention for the purpose of overcoming mountains, in the matter of transportation on railroads. A part of his invention was the system of lockage referred to above, by means of which the cars were made to ascend or descend from one level to another with great ease."

Cape Cod Branch Railroad.

We find in the Boston papers an account of the meeting at Wareham, of the subscribers to the stock of this road, which took place last week for organization, and to consult upon the propriety of urging this work forward.

"The meeting, says the Courier, was fully attended, the act of incorporation was accepted, and the following gentlemen were chosen directors: Joshua B. Tobey, of Wareham, Thomas J. Coggeshall, of Taunton, Richard Borden, of Fall River, Clark Hoxie, Howard Perry, of Sandwich, Nahum Stetson, of Bridgewater, Philander Washburn, of Middleboro', Pardon G. Seabury, of New Bedford,

ford, Southworth Shaw, Jr., of Boston. Mr. Rice, of the Tremont iron works company, stated that about one-half of the members of that company had subscribed an obligation to take as individuals, \$25,000 in the stock of the Cape Cod branch railroad, and with one exception, he thought all would. It was supposed at the meeting that all the stock would be taken, and the road be constructed forthwith."

Pennsylvania Railroad.

The commissioners of this road convened on Tuesday, Sept. 1, and although many of the friends of the road are just now from home, yet several hundred shares were subscribed for. It is expected, says the American Sentinel, that this undertaking will be subscribed for liberally. The commissioners adjourned to meet again in one week.

"We earnestly hope, adds the Sentinel, that this project will now seriously arrest the attention of our citizens. Two and a half millions are required to obtain the letters patent, of which nearly half is already subscribed; and when the company is organized, it is known that many are ready and willing to make contracts for work and materials, and to receive payment in the stock of the company. Subscriptions of this kind cannot be received by the commissioners. It will be a reflection on the enterprise and liberality of our citizens, if such a sum cannot be raised when the importance of the object is considered."

A Noble Act.

The Macon Messenger, of the 27th ult., gives the annexed account of a praiseworthy act, performed by a distinguished citizen of Georgia.

"We are informed," says the Macon Messenger, "that Judge Tarver, who lives in the lower part of Jefferson county, near the Central railroad, during the past spring, found that many of his poor neighbors were in a starving condition, in consequence of the short crops last year, and without the means of purchasing subsistence. He accordingly procured 1150 bushels of corn and 10 hogsheds of bacon from Savannah, which he distributed among them at moderate prices on a credit, to be paid for whenever they might be able. Such acts of generosity are worthy to be recorded in letters of gold, and we trust that the feelings of Judge Tarver have compensated him for this act.

"We might add, that this is one of the benefits derived from railroads. The Central road being able to lay down the provisions, at a very low rate, near the Judge's residence, when without it he could have obtained them only at a very great cost and much trouble."

The Copper Business.

We have viewed with interest the operations which are transpiring in the copper business—and from late accounts received from the lake country, and the copper regions generally, we are induced to make a few remarks relative to this very important branch of trade, which has recently engaged the attention of some of our largest and shrewdest capitalists. That there is a vast deal of valuable ore in our western and northwestern states, which in time, can and will be turned to good account, there is no question; that there is also a feeling and disposition in certain quarters to turn the matter to speculative

account, is also as true; and though there is and has been, for some months past, a disposition to traffic widely in the stocks of certain companies, which are not all they are said to be—we are nevertheless convinced that there is much good stock, and many valuable mines in our country which will prove highly profitable in due time to the stockholders and operators. We have gathered from a variety of sources the information which we annex below, and which will be found acceptable, we doubt not, to our readers generally, as showing, to a certain degree, the extent and advantages of some of the companies alluded to.

"Recent arrivals from the mineral regions, says a Detroit paper, brings us additional information of the mining prospects. The mines that are being worked continue rich, and large quantities of ore are constantly being shipped by several companies. The Boston and Lake Superior company has recently come upon a singular deposit in one of its shafts. It consists of small boulders of native copper, worn and polished in the shape of pebble stones on the sea shore. Eighteen hundred pounds of these small boulders have been taken out, and one large mass weighing 1,756 pounds. These came down on the Detroit last Monday. The Eagle Harbor and Pittsburg company are also shipping a large quantity of ores which are daily arriving here for the east.

"The Northwestern company of this city has discovered several exceedingly promising veins. Specimens taken from one vein sunk only four feet deep, are of the richest character, consisting of masses of native copper interspersed with native silver, and trap or vein rock well charged with native copper; these specimens are at Messrs. Coe & Coit's; this vein on its surface is four feet wide.

"Other locations are equally promising, but we have not heard the particulars. The most judicious of those who have just returned, seem very confident that the lake Superior region has mineral wealth beyond the fancy of the most sanguine men."

The Lake Superior News contains the following items:

"The Lake Superior copper company, up to the 1st of July last, had raised 1,028,000 pounds in rock containing native copper.

"The Pittsburg and Boston Copper Harbor mining company, to 1st of July, raised from lease No. 4 at this place, 78,000 pounds of black oxide, and 2,614,000 pounds from lease No. 5, (Cliff mine) of rock containing native copper.

"The Eagle Harbor mining company, the 16th of May last, had raised 168,000 of rock containing native copper.

"The Copper Falls company, to 1st July had raised 106,000 of rock containing native copper."

Large masses of nearly pure copper, not brought to the surface at the time, are not included in these statements.

The value of these ores we have not the information to enable us to state, but some of them we know were very rich.

A correspondent of the New York Evening Post, in an interesting letter, dated from Sault St. Marie, writes as follows:

"I have had a conversation with an intelligent geologist, who has just returned from an examination of the copper mines of Lake Superior. In regard to the mines, he told me that the external tokens, the surface indications, as he called them, were more favorable than those of any copper mines in the world. They are still, however, mere surface indications, the veins had not been worked to that depth which was necessary to determine their value with any certainty. The mixture of silver with the copper he regarded as not giving any additional value to the mines, inasmuch as it is only occasional and rare. Sometimes, he told me, a mass of metal would be discovered of the size of a man's fist, or smaller, composed of copper and silver, both metals being closely united, and yet both perfectly pure and unalloyed with each other. The masses of virgin copper found in beds of gravel, are, however, the most remarkable feature of these mines. One of them which has been discovered this summer, but which has not been raised, is estimated to weigh twenty tons. I saw in the propeller Independence, by which this party from the copper mines was brought down to the Sault, one of these masses, weighing seventeen hundred and fifty pounds, with the appearance of having once been fluid with heat. It was so pure that it might have been cut in pieces by cold steel and stamped at once into coin."

The mining operations, at Portage lake, are progressing rapidly and successfully, and we learn from western papers that the prospect is very cheering in that vicinity. The ores are represented as being exceedingly rich, and are readily taken out in large quantities.

The Baltimore Clipper, in an article upon copper smelting, remarks that the Baltimore and Cuba mining and smelting company's copper factory, situated on the south side of the harbor of Baltimore, is now in successful operation. They have already turned out a large amount of very superior copper, which they offer for sale. This new enterprise promises to be a source of both wealth and employment to many of the citizens of Baltimore.

These statements and statistics go to show that the copper business must eventually become very important, and in a few years, if the anticipations of many operators are realized, large fortunes will be made by those interested in the copper lands and mines of this country.

The Great Pacific Railroad.

We now offer a few remarks upon the practicability of this project. In 1803, Mr. Jefferson then president, sent Captains Lewis and Clarke, with a party of soldiers, to explore the country from the Mississippi river, along the Missouri to the Pacific ocean.—Even then, Mr. Jefferson, with that foresight which enabled him to look far over the heads of his contemporaries, to the immense importance of Louisiana to the Union, perceived, across this continent, up the Missouri and down the Columbia, the shortest avenue to the trade of China and India, that source of wealth which had successfully raised empires and for which the Caucasian race had been contending for more than three, perhaps for ten thousand years. Railroads were then

unknown. And had they never been invented, the avenue foreseen by Mr. Jefferson, and for whose exploration he sent the expedition commanded by Lewis and Clarke, would have been destined hereafter to this trade. But if the navigation of these rivers is to be superceded by railroads, and a more direct and permanently open route is thus to be obtained, the superiority of Mr. Jefferson over his opposing cotemporaries in statesman like foresight, is not the less conspicuous; and the explorations of Lewis and Clarke have been the basis of all subsequent examinations of the country between the Mississippi and the Pacific.

The route proposed by Mr. Whitney for his railroad, proceeds from lake Michigan, across the Mississippi above the mouth of the Wisconsin, thence across the Missouri above the mouth of the Great Platte, between the Council Bluffs and the Great Bend, a little below lat. 43, and thence to the Great South Pass, about lat. 42, 30, and thence along the valley of Lewis river, which is the southern main branch of the Columbia, to the head of ship navigation upon the latter, or to the bay of St. Francisco, as may hereafter be decided. Taking the Great South Pass as a point of departure eastward and westward, our first object is to ascertain the respective distances and elevations. According to Col. Fremont quoted in the report of Senator Breese, the elevation of the highest point in this Pass, above the gulf of Mexico, is 7,490 feet. Col. Fremont who explored the valley of the Great Platte, from its mouth to this Pass, in 1842, describes it as an open Prairie region, with an ascent almost or quite imperceptible by the traveller. He was accompanied by a Mr. Carson, who had resided in that region for 17 years, who had frequently crossed the Pass, and was thoroughly acquainted with the route. Yet with all his experience, he was obliged to watch very closely, to ascertain when he had reached the culminating point of the Pass through the Rocky mountains. The distance of the Great Pass to the mouth of the Kansas, is 963 miles, and from the mouth of the Platte 882, the latter being about 300 miles higher on the Missouri than the former; and as the mouth of the Kansas is 700 feet above the gulf of Mexico, and that of the Platte a trifle more, the average ascent from either point to the Pass, is only about 7 feet to the mile. And as the distance from lake Michigan to the Pass is 1,400 miles, and that between the lake and the mouth of the Kansas or Platte a level country, the average ascent from the lake to the Pass does not exceed $4\frac{1}{2}$ feet to the mile. According to Col. Fremont, the mouth of the Kansas is 700 feet above the gulf; the crossing of the Republican Fork 516 miles farther, is 2,300 feet, giving an ascent of $4\frac{1}{2}$ feet to the mile; the ascent of the next 128 miles is 1,000 feet, or about 8 to the mile; that of the next 107 miles, to St. Vrain's Fort, is 1,000 feet, or 9 to the mile; that of the next 80 is 1,300 feet or 16 to the mile; that of the next 18 miles is 800 feet, or about 42 to the mile; that of the next 87 miles is 200 feet, or $2\frac{1}{4}$ to the mile.

The distance from the Great Pass to the mouth of the Columbia, by the common travelling route is 1,400 miles, and to the head of its ship navigation about 1,230; and as the elevation of the Pass is 7,490 feet, the descent from this point to ship navigation gives an average of about 6 feet to the mile. From the Pass to a distance of 311 miles, the descent is 1,490 feet, or less than 5 to the mile. For 234 miles more, the route is level.—For 540 miles more, the surface is irregular and the next 178 miles end at an elevation of 3,000 feet; the descent from 6,000 to 3,000 feet, over a distance of 718 miles, giving an average of less than 3 feet, though that of the last 178 miles is 17 feet to the mile. From this point to the foot of the Blue mountains, 282 miles, the elevations and depressions give an average of $10\frac{1}{2}$ feet to the mile; and the remaining distance to fort Vancouver, the head of ship navigation 303 miles gives an average of $3\frac{1}{2}$ feet. All these elevations were taken by Col. Fremont, over the route usually travelled, though the committee suggest that future explorations will discover routes of less distances and ascents.

These facts show that in a distance of 2,630 miles, from lake Michigan to fort Vancouver, the elevation of the Great South Pass, 7,490 feet, and of the intermediate points, present no obstacles to a railroad.—*Phil. Ledger.*

St. Lawrence and Atlantic Railroad.

The Sherbrooke, [S. C.] Gazette of the 27th ult., has the following remarks in reference to the prospects of the St. Lawrence and Atlantic road.

"The news of the determination of the stockholders in the St. Lawrence and Atlantic railroad to go on with the work, was received in this town with the most lively feelings of satisfaction. It was announced early on Monday morning, that the event would be celebrated at noon by the firing of cannon, etc. Accordingly at 12 o'clock the stores and shops in town were closed, and some hundreds of our citizens assembled on Flag Staff hill to join in the demonstration. At the time appointed several blasts were fired at the site of the new grist mill, all the bells in town commenced ringing, when 21 rounds were fired from a cannon on a brow of the hill, over which the British flag was streaming in the wind, accompanied by the cheers of the multitude, and answered by a cannon managed by the boys on the north side of the Magog.

After the firing ceased, Col. Moore being called upon, observed that he had never met the people of Sherbrooke on a more pleasing occasion than the present. We might from this period date the prosperity not only of Sherbrooke, but of the eastern townships.—We have been laboring for six or eight years to obtain a railroad, but never until now, could we look upon its construction with any degree of certainty. But the time had now happily arrived, when the work was about to be commenced—and he would propose three cheers for the success of the St. Lawrence and Atlantic railroad. The sentiment was heartily responded to. He then proposed three cheers for A. T. Galt, Esq., to whose unwearied exertions we had been mainly in-

debted for the success of the undertaking.—This sentiment was also responded to with hearty good will. Three cheers was also given to the directors; and three cheers more for the queen, when the company separated, well pleased with the demonstration, and we doubt not the good news will be hailed throughout the townships with similar feelings."

Power of Enduring Heat.

We find the article which follows below, in one of our exchanges, credited to the "Philosophy of Magic." The experiments were very severe—but the oppressive weather we have had for the last ten days, has certainly given us "a taste" of what the parties must have realized!

"The female servant of a baker in Rochefoucault, clothed in flannel, was in the habit of entering her master's oven and remaining long enough to remove all the loaves; and Dr. Brewster informs us that the late Sir Francis Chantry's workmen entered the oven employed for drying the moulds, an iron apartment 14 feet long, 12 feet high, and 12 feet broad, the temperature of which with closed doors, was 350 degrees, and the iron floor red hot. They were guarded against the heat of the floor by wooden clogs, which were of course, charred on the surface. On one occasion, he adds, Mr. Chantry, accompanied by 5 or 6 of his friends, entered the furnace, and after remaining two minutes, they brought out a thermometer which stood at 320 degrees. Some of the party experienced sharp pains in the tips of their ears and in the septum of the nose, while others felt a pain in their eyes. These experiments prove the extraordinary heat which the living body can bear with impunity, and favor the possibility of persons passing uninjured through the flame, provided the body can be guarded from being scorched, by a non-conducting covering of an incombustible nature."

The Lake Country.

"In a few years the trade and commerce of the lake country will nearly equal the commerce of the Atlantic. At the present moment it exhibits evidence of gigantic increase. It is known that the first steamboat which reached Mackinaw was in 1819, and in 1826 steamboats navigated lake Michigan. In 1833 there were on the lakes, 11 steamers, which cost \$360,000, and which conveyed to and from the lake ports 61,485 passengers.—In 1834 there were 18 steamboats in the trade which cost \$600,000. In 1845 the following vessels navigated the lakes, above the falls of Niagara; steamboats 52, 27,500 tons; propellers 8, 2,500 tons; brigs 50, 11,000 tons; schooners 270, 42,000 tons. Total 280, 76,000 tons. The cost of the construction of these vessels was \$4,600,000.

"In the same year there were on lake Ontario 7 steamboats, 8 large propellers, and 100 brigs and schooners. The tonnage is estimated at 8,000. The navigation of the lakes is critical and requires great improvement in light houses, beacons, buoys, harbors, etc. During the last five years more than 400 lives have been lost, and last fall, during the boisterous weather, 60 lives were lost, 36 vessels driven ashore, 20 became total wrecks, 4 foundered, and the loss of property was es-

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estimated at \$200,000. In 1825, not less than 1,500,000 bbls. of flour passed over the lakes and 250,000 passengers. At the present time the commerce of the lakes may be fairly estimated at \$100,000,000 per annum. This is in the evidence of what that commerce will be hereafter, and how necessary it is for the government to foster and protect that trade in the improvement of the harbors and bays."

OFFICE NEW YORK AND ERIE RAILROAD CO.,
45 Wall Street, New York, Aug. 28, 1846.

NOTICE IS HEREBY GIVEN, THAT PROPOSALS will be received until the 13th day of October next, for the Grading, Masonry and Bridging required to complete that portion of the New York and Erie Railroad between a point three miles east of Port Jervis in Orange county, and the village of Binghamton in Broome county, a distance of about 133 miles.

Maps and profiles, estimates and specifications, will be found after the 10th of September in the office of the company, at New York city, where every necessary information will be given. The engineers on the line of the road will also furnish all requisite facilities to contractors desirous of examining the route.

The line will be divided into sections of convenient length for construction, and proposals in writing will be received at the New York office for the whole or any part of the work. By order of the President and Directors.

T. S. BROWN, Chief Engineer.

ST. LAWRENCE AND ATLANTIC RAILROAD.—Notice to Contractors.—Proposals will be received at the office of this St. Lawrence and Atlantic Railroad Company, No. 18 Little James Street, in the City of Montreal, until the 24th of September next, for the Grading, Masonry and Bridging, of a division of the Road, extending from the St. Lawrence River to the Village of St. Hyacinthe, a distance of about 30 miles.

Plans, Profiles and Specifications will be exhibited, and the requisite information given at the Engineer's Rooms in the Company's Offices, at Montreal, on or after the 15th of said month.

Persons offering to contract for the work, or any part of it, will be required to accompany their proposals with satisfactory references.

By order of the Board,

THOMAS STEERS, Secretary.

Office of the St. Lawrence and Atlantic R. R. Co.,
336 Montreal, 25th August, 1846.

NEW YORK AND ERIE RAILROAD CO.
The stockholders of the New York and Erie Railroad Company are hereby notified that an installment of Five Dollars per share on all shares on which the payments already made do not exceed 20 dollars, is required to be paid, (agreeable to the terms of subscription) at the office of the company, No. 45 Wall street, on or before the 1st day of October next. By order of the Board of Directors.

NATHANIEL MARSH, Sec'y.

New York, August 31st, 1846.

THE SUBSCRIBER IS PREPARED TO execute at the Trenton Iron Works, orders for Railroad Iron of any required pattern, and warranted equal in every respect in point of quality to the best American or imported Rails. Also on hand and made to order, Bar Iron, Braziers' and Wire Rods, etc., etc.

PETER COOPER, 17 Burling Slip.

1710 New York.

A. & G. RALSTON & CO., NO. 4
South Front St., Philadelphia, Pa.

Have now on hand, for sale, Railroad Iron, viz: 180 tons 2 1/2 x 1/2 inch Flat Punched Rails, 20 ft. long. 25 " 2 1/2 x 1/2 " Flange Iron Rails. 75 " 1 x 1/2 " Flat Punched Bars for Drafts in Mines. A full assortment of Railroad Spikes, Boat and Ship Spikes. They are prepared to execute orders for every description of Railroad Iron and Fixtures.

TO LOCOMOTIVE AND MARINE ENGINE BOILER BUILDERS. Pascal Iron Works, Philadelphia. Welded Wrought Iron Flues, suitable for Locomotives, Marine and other Steam Engine Boilers, from 2 to 5 inches in diameter. Also, Pipes for Gas, Steam and other purposes; extra strong Tube for Hydraulic Presses; Hollow Pistons for Pumps of Steam Engines, etc. Manufacture and for sale by

MORRIS TASKER & MORRIS,
Waterhouse S. E. corner 3d and Walnut Sts., Philadelphia.

MACHINE WORKS OF ROGERS, Ketchum & Grosvenor, Patterson, N. J. The undersigned receive orders for the following articles, manufactured by them of the most superior description in every particular. Their works being extensive and the number of hands employed being large, they are enabled to execute both large and small orders with promptness and despatch.

Railroad Work.

Locomotive steam engines and tenders; Driving and other locomotive wheels, axles, springs & flange tires; car wheels of cast iron, from a variety of patterns, and chills; car wheels of cast iron with wrought tires; axles of best American refined iron; springs; boxes and bolts for cars.

Cotton, Wool and Flax Machinery of all descriptions and of the most improved patterns, style and workmanship.

Mill gearing and Millwright work generally; hydraulic and other presses; press screws; callenders; lathes and tools of all kinds; iron and brass castings of all descriptions.

ROGERS, KETCHUM & GROSVENOR,
a45 Paterson, N. J., or 60 Wall street, N. York.

Valuable Works on Engineering for Sale.

The following works, belonging to the late Wm. R. Casey, have been deposited at this office for sale. It will be seen that they comprise most of the standard books. The reports and non-enumerated pamphlets are however among the best part of the collection, as many of them are not to be found or purchased at any price. So desirable an opportunity seldom offers for securing an excellent set of professional works.

LIST OF ENGINEERING BOOKS BELONGING TO W. R. CASEY, deceased.

- 1.—The Civil Engineer and Architect's Journal, quarto, vols. 1, 2, 4, 5 and 6, and nos. 79 to 81, and 84 to 95—remaining numbers expected from Montreal, Canada.
- 2.—Railroad Journal, quarto, vols. 1, 2, 3; octavo, vols. 7, 8, 9, 10, 11, 12, 13, 14, 15, 16 and 17; octavo vols. 18, and loose nos. to date; being nearly a complete set.
- 3.—Reports and Documents, 6 or 7 octavo vols.
- 4.—Tredgold's Carpentry, quarto, with plates.
- 5.—Barlow on Strength and Stress of Timber, octavo, with plates.
- 6.—Turnbull on Iron, octavo.
- 7.—Nicholson's Masonry and Stone Cutting, octavo, with plates.
- 8.—Tredgold's Tracts on Hydraulics, octavo, with plates.
- 9.—Gregory's Mathematics for Practical Men, octavo, with plates.
- 10.—Wood on Railroads, octavo.
- 11.—Pambour on Locomotives, octavo, with plates, (Philadelphia edition.)
- 12.—Lecount on Railroads, octavo, with plates.
- 13.—Smeaton's Tracts, 1796, octavo, with plates.
- 14.—Seward's New London Bridge, octavo, with plates.
- 15.—Storow's Treatise on Water Works, duodecimo.
- 16.—Report on Atmospheric Railway, etc., quarto, with plates.
- 17.—Gallier's Price Book and Estimator, octavo.
- 18.—Public Works of Great Britain, folio, \$25.
- 19.—Weale's Bridges, new and valuable, \$23.

The above books will be sold by the single volume, if desired, and forwarded by express, or otherwise, as directed by the purchaser.

Please address E. HEDGE, Railroad Journal Office,
23 Chambers street, New York.

PATENT INDESTRUCTIBLE WATER

Pipes. The subscribers continue to manufacture the above PIPES, of all the sizes and strength required for City or Country use, and would invite individuals or companies to examine its merits.—This pipe, unlike cast iron and lead, imparts neither color, oxide or taste, being formed of strongly riveted sheet iron, and evenly lined on the inside with hydraulic cement. While in the process of laying, it has a thick covering externally of the same—thus forming nature's own conduit of stone. The iron being thoroughly enclosed on both sides with cement, precludes the possibility of rust or decay, and renders the pipe truly indestructible. The prices are less than those of iron or lead. We also manufacture Basins and D. Traps, for Water Closets, on a new principle, which we wish the public to examine at 112 Fulton street, New York.

J. BALL & CO.

KEARNEY FIRE BRICK. F. W.

BRINLEY, Manufacturer, Perth Amboy, N. J. Guaranteed equal to any, either domestic or foreign. Any shape or size made to order. Terms, 4 mos. from delivery of brick on board. Refer to

James P. Allaire, } New York.
Peter Cooper, }
Murdoch, Leavitt & Co. }

J. Triplett & Son, Richmond, Va.

J. R. Anderson, Tredegar Iron Works, Richmond, Va.

J. Patton, Jr. } Philadelphia, Pa.
Colwell & Co. }

J. M. L. & W. H. Scovill, Waterbury, Con.

N. E. Screw Co. } Providence, R. I.
Eagle Screw Co. }

William Parker, Supt. Bost. and Worc. R. R.

New Jersey Malleable Iron Co., Newark, N. J.

Gardiner, Harrison & Co. Newark, N. J.

25,000 to 30,000 made weekly.

RAILROAD IRON.—THE SUBSCRIBER'S

New Rail Iron Mill at Phoenixville, Pa., is expected to be ready to go into operation by the 1st of September, and will be capable of turning out 30 to 40 tons of finished Rails per day. They are now prepared to receive orders to that extent, deliverable after the 1st of October next, for heavy rails of any pattern now in use, equal in quality and finish to best imported.

PIG IRON.—They are also receiving weekly 150 to 200 tons of No. 1 Phoenix Foundry Iron, well adapted for light castings.

REEVES, BUCK & CO.,

45 North Water St., Philadelphia,

or by their Agent, ROBT. NICHOLS,

79 Water St., New York.

RAILROAD SCALES.—THE ATTENTION

of Railroad Companies is particularly requested to Ellicott's Scales, made for weighing loaded cars in trains, or singly, they have been the inventors, and the first to make platform scales in the United States; supposing that an experience of 20 years has given a knowledge and superior advantage in the business.

The levers of our scales are made of wrought iron, all the bearers and fulcrums are made of the best cast steel, laid on blocks of granite, extending across the pit, the upper part of the scale only being made of wood. E. Ellicott has made the largest Railroad Scale in the world, its extreme length was one hundred and twenty feet, capable of weighing ten loaded cars at a single draft. It was put on the Mine Hill and Schuylkill Haven Railroad.

We are prepared to make scales of any size to weigh from five pounds to two hundred tons.

ELLICOTT & ABBOTT.

Factory, 9th street, near Coates, cor. Melon st.

Office, No. 3 North 5th street,

Philadelphia, Pa.

SPRING STEEL FOR LOCOMOTIVES,

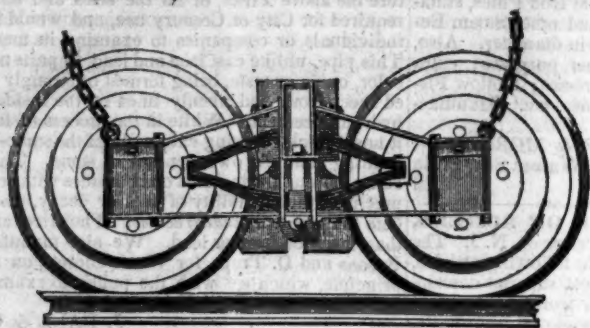
Tenders and Cars. The Subscriber is engaged in manufacturing Spring Steel from 1 1/2 to 6 inches in width, and of any thickness required: large quantities are yearly furnished for railroad purposes, and wherever used, its quality has been approved of. The establishment being large, can execute orders with great promptitude, at reasonable prices, and the quality warranted. Address

JOAN F. WINSLOW, Agent,

Albany Iron and Nail Works,

RAY'S EQUALIZING RAILWAY TRUCK.—THE SUBSCRIBER

having recently formed a business connection in the City of New



York, expressly for the manufacture of the newly patented and highly approved Railroad Truck of Mr. Fowler M. Ray, is ready to receive orders for building the same, from Railroad Companies and Car Builders in the United States, and elsewhere.

The above Truck has now been in use from one to two years on several roads a sufficient length of time to test its durability, and other good qualities, and to satisfy those who have used it, as may be seen by reference to the certificates which follow this notice.

There have been several improvements lately introduced upon the Truck, such as additional springs in the bolster of passenger cars, making them delightful riding cars—adapting it to tenders, trucks forward of the locomotive, and freight cars, which, with its original good qualities, make it in all respects the most desirable truck now offered to the public.

Orders for the above, will, for the present, be executed at the New York Screw Mill, corner 33d street and 3d avenue, (late P. Cooper's rolling mills) and at the Steam Engine Shop of T. F. Secor & Co., foot of 9th street, East

river, (of which firm the subscriber was late a partner) under the immediate supervision of Mr. Ray himself.

Several sets of trucks containing the latest improvements have recently been turned out for the New York and Erie railroad, and the New Jersey Transportation company, which may be seen upon said roads.

The patronage of Railroad Companies and Car Builders is respectfully solicited.

New York, May 4, 1846.

W. H. CALKINS, and Others.

To all whom it may concern:—This is to certify that the New Haven, Hartford and Springfield railroad co., have had in use six sets of F. M. Ray's patent trucks for the last 20 months, during which time it appears to me, they have proved to be the best and most economical truck now in use.

[Signed.]

WILLIAM ROE, Sup't of Power.

I certify that F. M. Ray's Patent Equalizing Railroad Truck has been in use on the Philadelphia and Reading railroad for some time past, under a passenger car.

For simplicity of construction, economy in cost, lightness of material, and extreme ease of motion, I consider it the best truck we have ever used. Its peculiar make also renders it less liable to be thrown off the track, when passing over any obstruction. We intend using it extensively under the passenger and freight cars of the above road.

Reading, Pa., October 6, 1845.

[Signed.] G. A. NICOLL,

Sup't Transportation, etc., Philadelphia and Reading Railroad.

To all whom it may concern:—This is to certify that the N. Jersey Railroad and Transportation company have used Fowler M. Ray's Truck for the last seven months, during which time it has operated to our entire satisfaction. I have no hesitation in saying that it is the simplest and most economical truck now in use.

[Signed.] T. L. SMITH,

Jersey City, November 4, 1845. N. Jersey Railroad and Transp. Co.

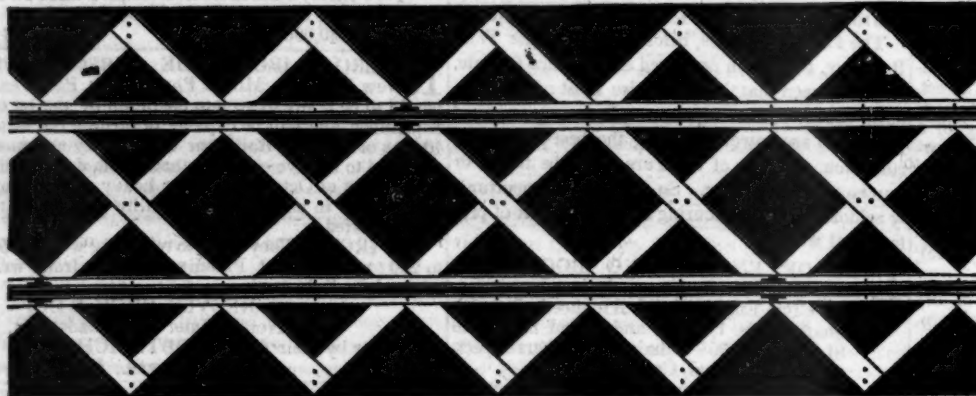
This is to certify that F. M. Ray's Patent Equalizing Railroad Truck has been in use on the Long Island railroad for the last year, under a freight car. For simplicity of construction, economy in cost, lightness of material and ease of motion, I consider it equal to any truck we have in use.

Long Island Railroad Depot,

[Signed.] JOHN LEACH,

Jamaica November 12, 1845. 1y19 Sup't Motive Power.

HERRON'S PATENT AMERICAN RAILWAY TRACK,



As seen stripped of the top ballasting

HERRON'S IMPROVEMENTS IN RAILWAY Superstructure effect a large aggregate saving in the working expenses, and maintenance of railways, compared with the best tracks in use. This saving is effected—1st, Directly by the amount of the increased load that will be hauled by a locomotive, owing to the superior evenness of surface, of line and of joint. This gain alone may amount to 20 per cent. on the usual load of an engine.—2d, In consequence of the thorough combination, bracing, and large bearing surface of this track, it will be maintained in a better condition than any other track in use, at about one-third the expense.—3d, As action and reaction are equal, a corresponding saving of about two-thirds will be effected in the wear and tear of the engines and cars, by the even surface and elastic structure of the track.—4th, The great security to life, and less liability to accident or damage, should the engine or cars be thrown off the rails.—5th, The absence of jar and vibration, that shake down retaining walls, embankments and bridges.—6th, The great advantage of the high speed that may be safely attained, with ease of motion, reduction of noise, and consequently increased comfort to the traveller.—7th, The really permanent and perfect character of the Way, insuring regularity of transit. To which may be added the great increase of travel, that would be induced by the foregoing qualities to augment the revenue of the railroad.

The cost of the Patent track will depend on the quantity and cost of iron and other materials; but it will not exceed, even including the preservation of the timber, the average cost of the tracks on our principal railroads. Generally, the timber structure, fastenings and workmanship, exclusive of the cost of the iron rails, will be from \$2,300 to \$4,000 per mile. On this structure, rails of from 40 to 50 lbs. per yard, will be equal in effect to

60 and 70 lbs. rails laid in the usual way. The proprietors of a road, furnishing approved materials in the first instance, the undersigned will construct the track on his plan: not the most perfect manner, with recent improvements, for one thousand dollars per mile. And he will farther contract to maintain said track for the period of ten years, furnishing such preserved timber and iron fastenings as may be required, and keeping said track in perfect adjustment, under any trade not exceeding 100,000 tons per annum, or its equivalent in passenger transportation, for Two hundred dollars per mile per annum.* To insure the faithful performance of this contract, he will pledge one-fourth of the cost of construction, with the accruing interest thereon, regularly vested, until the completion of the contract. So that a company, by securing payment to the undersigned at the specified period, will have only \$750 per mile to pay for the workmanship on the track, without any charge being made for the use of the patent, the subsequent payments, for maintenance of way, and amount withheld, being made from the large margin of profits that will result from its use.

JAMES HERRON.

Civil Engineer and Patentee.

No. 277 South Tenth St., Philadelphia.

* A general average of the repairs done on six of the most successful railroads in this country, for a period of from six to eight years' use has been found to exceed \$625 per mile per annum, exclusive of renewal of rails. But few roads in this country carry as much as 100,000 tons per annum. When a road exceeds that quantity, the repairs due to the additional tonnage, up to 200,000 tons, will be charged at one mill per ton; over the latter, and not exceeding 300,000 tons, nine-tenths of a mill, etc. Where there are two tracks to maintain, a large reduction upon those rates will be made.

THE AMERICAN RAILROAD JOURNAL is the only periodical having a general circulation throughout the Union, in which all matters connected with public works can be brought to the notice of all persons in any way interested in these undertakings. Hence it offers peculiar advantages for advertising times of departure, rates of fare and freight, improvements in machinery, materials, as iron, timber, stone, cement, etc. It is also the best medium for advertising contracts, and placing the merits of new undertakings fairly before the public.

RATES OF ADVERTISING.

One page per annum.....	\$125 00
One column ".....	50 00
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One page per month.....	20 00
One column ".....	8 00
One square ".....	2 50
One page, single insertion.....	8 00
One column ".....	3 00
One square ".....	1 00
Professional notices per annum...	5 00

ENGINEERS and MACHINISTS.

THOMAS PROSSER, 28 Platt St. N.Y. (See Adv.)

J. F. WINSLOW, Albany Iron and Nail Works, Troy, N. Y. (See Adv.)

TROY IRON AND NAIL FACTORY, H. Burden, Agent. (See Adv.)

ROGERS, KETCHUM AND GROSVENOR, Patterson, N. J. (See Adv.)

S. VAIL, Speedwell Iron Works, near Morristown, N. J. (See Adv.)

NORRIS, BROTHERS, Philadelphia Pa. (See Adv.)

KITE'S Patent Safety Beam. (See Adv.)

FRENCH & BAIRD, Philadelphia, Pa. (See Adv.)

NEWCASTLE MANUFACTURING COMPANY, Newcastle, Del. (See Adv.)

ROSS WINANS, Baltimore, Md. CYRUS ALGER & Co., South Boston Iron Company.

SETH ADAMS, Engineer, South Boston. STILLMAN, ALLEN & Co., N. Y.

JAS. P. ALLAIRE, N. Y. PHOENIX FOUNDRY, N. Y.

ANDREW MENEELY, West Troy. JOHN F. STARR, Philadelphia, Pa.

MERRICK & TOWNE, do. HINCCKLEY & DRURY, Boston. C. C. ALGER, Stockbridge Iron Works, Stockbridge, Mass.

PATENT HAMMERED RAILROAD, SHIP and Boat Spikes. The Albany Iron and Nail Works have always on hand, of their own manufacture, a large assortment of Railroad, Ship and Boat Spikes, from 2 to 12 inches in length, and of any form of head. From the excellence of the material always used in their manufacture, and their very general use for railroads and other purposes in this country, the manufacturers have no hesitation in warranting them fully equal to the best spikes in market, both as to quality and appearance. All orders addressed to the subscriber at the works, will be promptly executed. **JOHN F. WINSLOW, Agent.**

Albany Iron and Nail Works, Troy, N. Y.
The above spikes may be had at factory prices, of Erastus Corning & Co., Albany; Hart & Merritt, New York; J. H. Whitney, do.; E. J. Etting, Philadelphia; Wm. E. Coffin & Co. Boston. ja45

PATENT RAILROAD, SHIP AND BOAT Spikes. The Troy Iron and Nail Factory keeps constantly for sale a very extensive assortment of Wrought Spikes and Nails, from 3 to 10 inches, manufactured by the subscriber's Patent Machinery, which after five years' successful operation, and now almost universal use in the United States (as well as England, where the subscriber obtained a patent) are found superior to any ever offered in market.

Railroad companies may be supplied with Spikes having countersink heads suitable to holes in iron rails, to any amount and on short notice. Almost all the railroads now in progress in the United States are fastened with Spikes made at the above named factory—for which purpose they are found invaluable, as their adhesion is more than double any common spikes made by the hammer.

All orders directed to the Agent, Troy, N. York, will be punctually attended to.

HENRY BURDEN, Agent.
Spikes are kept for sale, at Factory Prices, by I. & J. Townsend, Albany, and the principal iron merchants in Albany and Troy; J. I. Brower, 222 Water St., New York; A. M. Jones, Philadelphia; T. Janviers, Baltimore; Degrand & Smith, Boston.

•• Railroad Companies would do well to forward their orders as early as practicable, as the subscriber is desirous of extending the manufacturing so as to keep pace with the daily increasing demand. ja45

FRENCH AND BAIRD'S PATENT SPARK ARRESTER.

TO THOSE INTERESTED IN Railroads, Railroad Directors and Managers are respectfully invited to examine an improved SPARK ARRESTER, recently patented by the undersigned.

Our improved Spark Arresters have been extensively used during the last year on both passenger and freight engines, and have been brought to such a state of perfection that no annoyance from sparks or dust from the chimney of engines on which they are used is experienced.

These Arresters are constructed on an entirely different principle from any heretofore offered to the public. The form is such that a rotary motion is imparted to the heated air, smoke and sparks passing through the chimney, and by the centrifugal force thus acquired by the sparks and dust they are separated from the smoke and steam, and thrown into an outer chamber of the chimney through openings near its top, from whence they fall by their own gravity to the bottom of this chamber; the smoke and steam passing off at the top of the chimney, through a capacious and unobstructed passage, thus arresting the sparks without impairing the power of the engine by diminishing the draught or activity of the fire in the furnace.

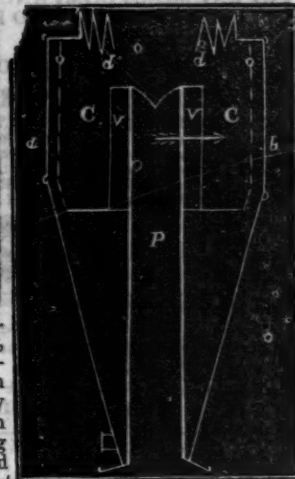
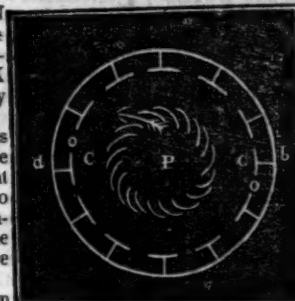
These chimneys and arresters are simple, durable and neat in appearance. They are now in use on the following roads, to the managers and other officers of which we are at liberty to refer those who may desire to purchase or obtain further information in regard to their merits:

R. L. Stevens, President Camden and Amboy Railroad Company; Richard Peters, Superintendent Georgia Railroad, Augusta, Ga.; G. A. Nicolls, Superintendent Philadelphia, Reading and Pottsville Railroad, Reading, Pa.; W. E. Morris, President Philadelphia, Germantown and Norristown Railroad Company, Philadelphia; E. B. Dudley, President W. and R. Railroad Company, Wilmington, N. C.; Col. James Gadsden, President S. C. and C. Railroad Company, Charleston, S. C.; W. C. Walker, Agent Vicksburgh and Jackson Railroad, Vicksburgh, Miss.; R. S. Van Rensselaer, Engineer and Sup't Hartford and New Haven Railroad; W. R. M'Kee, Sup't Lexington and Ohio Railroad, Lexington, Ky.; T. L. Smith, Sup't New Jersey Railroad Trans. Co.; J. Elliott, Sup't Motive Power Philadelphia and Wilmington Railroad, Wilmington, Del.; J. O. Sterns, Sup't Elizabethtown and Somerville Railroad; R. R. Cuyler, President Central Railroad Company, Savannah, Ga.; J. D. Gray, Sup't Macon Railroad, Macon, Ga.; J. H. Cleveland, Sup't Southern Railroad, Monroe, Mich.; M. F. Chittenden, Sup't M. P. Central Railroad, Detroit, Mich.; G. B. Fisk, President Long Island Railroad, Brooklyn.

Orders for these Chimneys and Arresters, addressed to the subscribers, care Messrs. Baldwin & Whitney, of this city or to Hinckly & Drury, Boston, will be promptly executed. **FRENCH & BAIRD.**

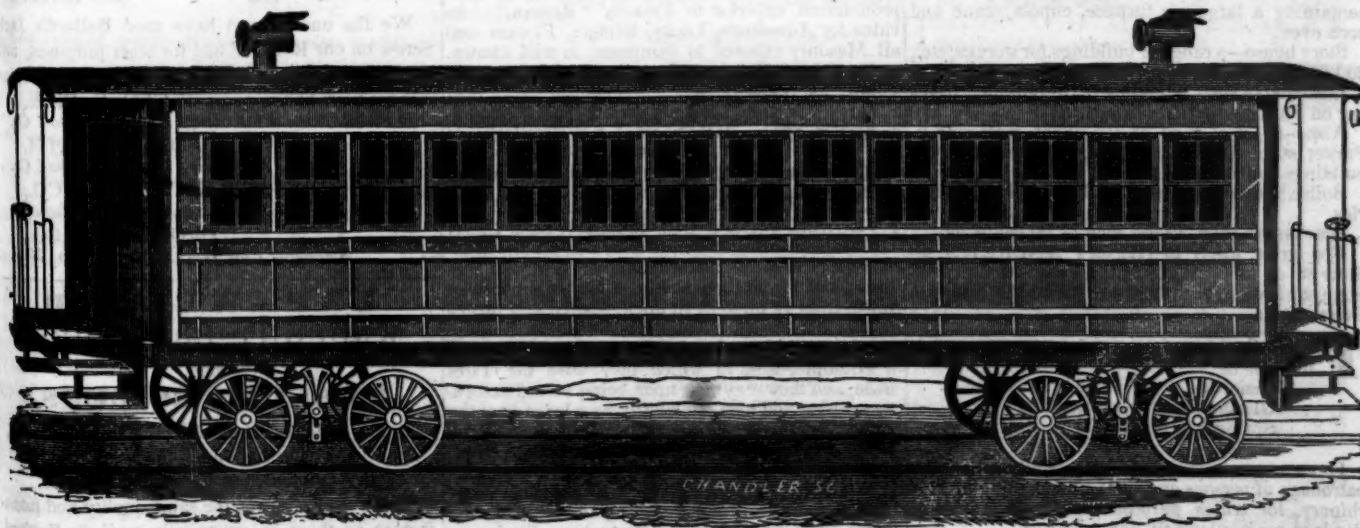
N. B.—The subscribers will dispose of single rights, or rights for one or more States, on reasonable terms. Philadelphia, Pa., April 6, 1844.

•• The letters in the figures refer to the article given in the Journal of June, 1844. ja45



BENTLEY'S PATENT TUBULAR STEAM BOILER. The above named Boiler is similar in principle to the Locomotive boilers in use on our Railroads. This particular method was invented by Charles W. Bentley, of Baltimore, Md., who has obtained a patent for the same from the Patent Office of the United States, under date of September 1st, 1843—and they are now already in successful operation in several of our larger Hotels and Public Institutions, Colleges, Alms Houses, Hospitals and Prisons, for cooking, washing, etc.; for Bath houses, Hatters, Silk, Cotton and Woollen Dyers, Morocco dressers, Soap boilers, Tallow chandlers, Pork butchers, Glue makers, Sugar refiners, Farmers, Distillers, Cotton and Woollen mills, Warming Buildings, and for Propelling Power, etc., etc.; and thus far have given the most entire satisfaction, may be had of D. K. MINOR, 23 Chambers st. New York.

DAVENPORT & BRIDGES' CAR WORKS.



DAVENPORT & BRIDGES CONTINUE TO MANUFACTURE TO ORDER, AT THEIR WORKS, IN CAMBRIDGEPORT, MASS. Passenger and Freight Cars of every description, and of the most improved pattern. They also furnish Snow Ploughs and Chilled Wheels of any pattern and size. Forged Axles, Springs, Boxes and Bolts for Cars at the lowest prices. All orders punctually executed and forwarded to any part of the country. Our Works are within fifteen minutes ride from State street, Boston—coaches pass every fifteen minutes. 171

TO RAILROAD COMPANIES AND BUILDERS OF MARINE AND LOCOMOTIVE ENGINES AND BOILERS.

PASCAL IRON WORKS.

WELDED WROUGHT IRON TUBES

From 4 inches to 1 in calibre and 2 to 12 feet long, capable of sustaining pressure from 400 to 2500 lbs. per square inch, with Stop Cocks, T's, L's, and other fixtures to suit, fitting together, with screw joints, suitable for STEAM, WATER, GAS, and for LOCOMOTIVE and other STEAM BOILER FLUES.



Manufactured and for sale by
MORRIS, TASKER & MORRIS.
Warehouse S. E. Corner of Third & Walnut Streets,
PHILADELPHIA.

ENGINEERS' AND SURVEYERS'
INSTRUMENTS MADE BY
EDMUND DRAPER,
Surviving partner of
STANCLIFFE & DRAPER.



No 23 Pear street, below Walnut,
1y10 near Third, Philadelphia.

VALUABLE PROPERTY ON THE MILL Dam For Sale. A lot of land on Gravelly Point, so called, on the Mill Dam, in Roxbury, fronting on and east of Parker street, containing 68,497 square feet, with the following buildings thereon standing.

Main brick building, 120 feet long, by 46 ft wide, two stories high. A machine shop, 47x43 feet, with large engine, face, screw, and other lathes, suitable to do any kind of work.

Pattern shop, 35x32 ft, with lathes, work benches, work shop, 86x35 feet, on the same floor with the pattern shop.

Forge shop, 118 feet long by 44 feet wide on the ground floor, with two large water wheels, each 16 feet long, 9 ft diameter, with all the gearing, shafts, drums, pulleys, &c., large and small trip hammers, furnaces, forges, rolling mill, with large balance wheel and a large blowing apparatus for the foundry.

Foundry, at end of main brick building, 60x45 feet two stories high, with a shed part 45x20 feet, containing a large air furnace, cupola, crane and corn oven.

Store house—a range of buildings for storage, etc., 200 feet long by 20 wide.

Locomotive shop, adjoining main building, fronting on Parker street, 54x25 feet.

Also—A lot of land on the canal, west side of Parker st., containing 6000 feet, with the following buildings thereon standing:

Boiler house 50 feet long by 30 feet wide, two stories.

Blacksmith shop, 49 feet long by 20 feet wide. For terms, apply to **HENRY ANDREWS**, 48 State st., or to **CURTIS, LEAVENS & CO.**, 106 State st., Boston, or to **A. & G. RALSTON & CO.**, Philadelphia. ja45

THE SUBSCRIBERS, AGENTS FOR

the sale of
Codorus,
Glendon,
Spring Mill and
Valley, } Pig Iron.

Have now a supply, and respectfully solicit the patronage of persons engaged in the making of Machinery, for which purpose the above makes of Pig Iron are particularly adapted.

They are also sole Agents for Watson's celebrated Fire Bricks and prepared Kaolin or Fire Clay, orders for which are promptly supplied.

SAM'L. KIMBER, & CO.,

59 North Wharves,

Jan. 14, 1846. [1y4] Philadelphia, Pa.

ENGLISH PATENT WIRE ROPES—FOR THE USE OF MINES, RAILWAYS, ETC.—

for sale or imported to order by the subscriber.
These Ropes are manufactured on an entirely different principle from any other, and are now almost exclusively used in the collieries and on the railways in Great Britain, where they are considered to be greatly superior to hempen ones, or iron chains, as regards safety, durability and economy. The plan upon which they are made effectually secures them from corrosion in the interior, as well as the exterior of the rope, and gives a greater compactness and elasticity than is found in any other manufacture.

Many of these ropes have been in constant operation in the different mines in England, and on the Blackwall and other inclined planes, for three and four years, and are still in good condition.

They have been applied to almost every purpose for which hempen ropes have been used—mines, heavy cranes, standing rigging, window cords, lightning conductors, signal halyards, tiller ropes, etc. Reference is made to the annexed statement for the relative strength and size. Testimonials from the most eminent engineers in England can be shown as to their efficiency, and any additional information required respecting the different descriptions and application will be given by

ALFRED L. KEMP,

75 Broad street, New York, sole agent in the United States.

Statement of Trial made at the Woolwich Royal Dock Yard, of the Patent Wire Ropes, as compared with Hempen Ropes and Iron Chains of the same strength.—October, 1841.

WIRE ROPES.				HEMPEN ROPES.				CHAINS.		STRENGTH Tons.
Wire gauge number.	Circumference of rope.	Weight per fathom.		Circumference of rope.	Weight per fathom.			Weight per fathom.	Diameter of iron.	
	INCH.	LBS.	OZ.	INCH.	LBS.	OZ.		LBS.	INCH.	
11	4½	13	5	10	24	-		50	15-16	20
13	3½	8	3	8½	16	-		27	11-16	13½
14	3½	6	11	7½	12	8		17	9-16	10½
15	2½	5	2	6½	9	4		13½	1-2	7½
16	2½	4	3	6	8	8		10½	7-16	7

N.B. The working load, with a perpendicular lift, may be taken at 6 cwt. for every lb. weight per fathom, so that a rope weighing 5 lbs. per fathom would safely lift 3360 lbs., and so on in proportion. 1y34

NICOLL'S PATENT SAFETY SWITCH

for Railroad Turnouts. This invention, for some time in successful operation on one of the principal railroads in the country, effectually prevents engines and their trains from running off the track at a switch, left wrong by accident or design.

It acts independently of the main track rails, being laid down, or removed, without cutting or displacing them.

It is never touched by passing trains, except when in use, preventing their running off the track. It is simple in its construction and operation, requiring only two Castings and two Rails; the latter, even if much worn or used, not objectionable.

Working Models of the Safety Switch may be seen at Messrs. Davenport and Bridges, Cambridgeport, Mass., and at the office of the Railroad Journal, New York.

Plans, Specifications, and all information obtained on application to the Subscriber, Inventor, and Patentee

G. A. NICOLLS,
Reading, Pa.

LAWRENCE'S ROSENDALE HYDRAULIC Cement. This cement is warranted equal to any manufactured in this country, and has been pronounced superior to Francis' "Roman." Its value for Aqueducts, Locks, Bridges, Floods and all Masonry exposed to dampness, is well known, as it sets immediately under water, and increases in solidity for years.

For sale in lots to suit purchasers, in tight papered barrels, by **JOHN W. LAWRENCE,**

142 Front street, New York.

Orders for the above will be received and promptly attended to at this office. 32 1y

GEORGE VAIL & CO., SPEEDWELL IRON Works, Morristown, Morris Co., N. J.—Manufacturers of Railroad Machinery; Wrought Iron Tires, made from the best iron, either hammered or rolled, from 1½ in. to 2½ in. thick.—bored and turned outside if required. Railroad Companies wishing to order, will please give the exact inside diameter, or circumference, to which they wish the Tires made, and they may rely upon being served according to order, and also punctually, as a large quantity of the straight bar is kept constantly on hand.—Crank Axles, made from the best refined iron; Straight Axles, for Outside Connection Engines; Wrought Iron Engine and Truck Frames; Railroad Jack Screws; Railroad Pumping and Sawing Machines, to be driven by the Locomotive; Stationary Steam Engines; Wrought Iron work for Steamboats, and Shafting of any size; Grist Mill, Saw Mill and Paper Mill Machinery; Mill Gearing and Mill Wright work of all kinds; Steam Saw Mills of simple and economical construction, and very effective Iron and Brass Castings of all descriptions.

BALLARD'S NEWLY IMPROVED Patent Jack Screw.

The advantages of this Jack Screw for Stonequarries, Railroads, Steam Boiler Builders, and other purposes, are superior to any other machine.

The improvement consists in being able to use either end of the Screw, as occasion requires.

It is capable of raising the heaviest Locomotive with ease, being portable, strong and powerful, and not likely to get out of order.

Many Railroad Companies and Boiler makers have them in use, by whom they are highly recommended.

JACK SCREWS of various kinds, sizes, power and price, constantly on hand at the manufactory,
No. 7 Eldridge St.,
4135 near Division.

We the undersigned have used Ballard's Jack Screw on our Railroad and for other purposes, and we consider them superior to any other machine that we have had.

GEO. B. FISK,

Pres. Long Island Railroad Co.

TIMOTHY L. SMITH,

Agent New Jersey Railroad Co.

H. R. DUNHAM & CO.,

Locomotive and Steam Engine Builders.

GEO. VAIL & CO.,

Speedwell Iron Works, Morristown, N. J.

LAP—WELDED WROUGHT IRON TUBES

FOR

TUBULAR BOILERS,

FROM 1-4 TO 6 INCHES DIAMETER, and

ANY LENGTH, NOT EXCEEDING 17 FEET.

These Tubes are of the same quality and manufacture as those so extensively used in England, Scotland, France and Germany, for Locomotive, Marine and other Steam Engine Boilers.

THOMAS PROSSER,

Patentee.

23 Platt street, New York.